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SESSIONAL PAPERS.

VOL. XXXIV.—PART VI.

FIFTH SESSION, NINTH LEGISLATURE

OF THE

PROVINCE OF ONTARIO

SESSION 1902.

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Bee-Keepers Association, Report	20	*Printed.*
Birds of Ontario, in relation to Agriculture	56	*Printed (for distribution only)*
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No. 2.. Estimates (*Vote of Credit*) for the year 1902. Presented to the Legislature, 16th January, 1902. *Not Printed.* Estimates for the year 1902. Presented to the Legislature, 20th January, 1902. *Printed.* Estimates (Supplementary.) Presented to the Legislature, 6th March, 1902. *Printed.* Estimates (Further Supplementary.) Presented to the Legislature, 13th March, 1902. *Printed.*

No. 3.. Report of the Commissioner of Crown Lands, for the year 1901. Presented to the Legislature, 17th February, 1902. *Printed.*

No. 4.. Report of the Clerk of Forestry for the years 1900-1901. Presented to the Legislature, 6th February, 1902. *Printed.*

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No. 6.. Report of the Commissioners for the Queen Victoria Niagara Falls Park, for the year 1901. Presented to the Legislature, 28th January, 1902. *Printed.*

No. 7.. Report of the Commissioner of Public Works for the year 1901 Presented to the Legislature, 11th February, 1902. *Printed.*

No. 8.. Report of the Inspectors of Factories, for the year 1901. Presented to the Legislature, 4th March, 1902. *Printed.*

No. 9.. Report upon the Registration of Births, Marriages and Deaths in the Province for the year 1901. Presented to the Legislature, 21st February, 1902. *Printed.*

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No. 10.. Report of the Inspector of Insurance and Registrar of Friendly Societies for the year 1902. Presented to the Legislature, 5th March, 1902. *Printed.*

No. 11.. Financial Statements made by Building Societies, Loan Companies, Loaning Land Companies and Trust Companies for the year 1901. Presented to the Legislature, 5th March. 1902. *Printed.*

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No. 13.. Report of the University of Toronto, Auditors Report on Capital and Income Accounts for the year ending 30th June, 1901. Presented to the Legislature, 9th January, 1902. *Printed.*

No. 14.. Report of the Ontario Agricultural College and Experimental Farm, for the year 1901. Presented to the Legislature, 18th February, 1902. *Printed.*

No. 15. Report of the Agricultural and Experimental Union of Ontario, for the year 1901. Presented to the Legislature, 4th March 1902. *Printed.*

No. 16.. Report of the Fruit Growers Association for the year 1901. Presented to the Legislature, 4th March 1902. *Printed.*

No 17.. Report of the Fruit Experiment Stations of Ontario, for the year 1901. Presented to the Legislature, 11th February, 1902. *Printed.*

No. 18.. Report of the Inspector of Fumigation Appliances in Ontario, for the year 1901. Presented to the Legislature, 14th February, 1902 *Printed.*

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No. 20.. Report of the Bee-Keepers Association for the year 1901. Presented to the Legislature, 5th March, 1902. *Printed.*

No. 21.. Report of the Poultry Association for the year 1901. Presented to the Legislature, 27th February, 1902. *Printed.*

No. 22 . Report of the Dairymen's Association for the year 1901. Presented to the Legislature, 4th March, 1902. *Printed.*

No. 23.. Report of the Live Stock Breeders' Association for the year 1901. Presented to the Legislature, 22nd February, 1902. *Printed.*

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No 27.. Report of the Commissioner of Highways for the year 1901. Presented to the Legislature, 6th March, 1902. *Printed.*

No. 28.. Report of the Bureau of Industries for the year 1901. Presented to the Legislature, 4th March, 1902. *Printed.*

No. 29.. Report of the Bureau of Labour for the year 1901. Presented to the Legislature, 27th February, 1902. *Printed*

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No. 32. Report of the Director of Colonization for the year 1901. Presented to the Legislature, 4th March, 1902. *Printed.*

No. 33.. Report of the Inspector of Division Courts for the year 1901. Presented to the Legislature, 29th January, 1902. *Printed.*

No. 34.. Report of the Inspector of Legal Offices for the year 1901. Presented to the Legislature, 20th January, 1902. *Printed.*

No. 35.. Report of the Inspector of Registry Offices for the year 1901. Presented to the Legislature, 14th February, 1902. *Printed.*

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No. 38.. Report upon the Lunatic and Idiot Asylums of the Province for the year ending 30th September, 1901. Presented to the Legislature, 14th February, 1902. *Printed.*

No. 39 . Report upon the Common Gaols, Prisons and Reformatories of the Province for the year ending 30th September, 1901. Presented to the Legislature, 14th February, 1902. *Printed.*

No. 40.. Report upon the Hospitals, Refuges, etc , of the Province for the year ending 30th September, 1901. Presented to the Legislature, 5th March, 1902. *Printed.*

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No. 42.. Report upon the Ontario Institution for the Education of the Deaf and Dumb, Belleville, for the year ending 30th September, 1901. Presented to the Legislature, 13th January, 1902. *Printed.*

No. 43.. Report upon the work under the Children's Protection Act for the year 1901. Presented to the Legislature, 27th February, 1902. *Printed.*

No. 44.. Report of the Inspector of Liquor Li enses for the year 1901. Presented to the Legislature, 9th January, 1902. *Printed.*

No. 45.. Report of the Provincial Municipal Auditor for the year 1901. Presented to the Legislature, 9th January, 1902. *Printed.*

No. 46.. Return from the Records of the several elections to the Legislative Assembly in the Electoral Districts of South Perth, North Waterloo, London, East Kent and West Huron, since the General Election of March 1st, 1898, shewing:—(1) The number of Votes polled for each Candidate in the Electoral District in which there was a contest. (2) The majority wh reby each successful Candidate was returned. (3) The total number of Votes polled in each District. (4) The number of names on the Voters' Lists in each District. (5) The population of each District as shewn by the last Census. Presented to the Legislature, 9th January, 1902. *Printed.*

No. 47.. Report of the Legislative Librarian on the State of the Library. Presented to the Legislature, 8th January, 1902. *Not Printed.*

No. 48.. Report of the Assessment Commission 1902. Presented to the Legislature, 19th February, 1902. *Printed.*

No. 49.. Copy of Order in Council and Report of Committee *re* Compilation of the Imperial Statutes in force in the Province, under the provisions of Chapter 111, R.S.O., 1897, an l now contained in Vol. III. R.S.O. Presented to the Legislature, 9th January, 1902. *Printed for Sessional Papers only.*

No. 50.. Account of the Official Guardian *ad litem* for the year 1901. Presented to the Legislature, 13th January, 1902. *Not Printed.*

No. 51.. Copy of Order in Council respecting the commutation of fees of A. M. McKinnon, Local Master and Registrar at Guelph Presented to the Legislature, 15th January, 1902. *Not Printed.*

No. 52.. Copy of Order in Council respecting payment to His Honour B. L. Doyle, Junior Judge of the County of Huron, of the surplus Surrogate fees of the County. Presented to the Legislature, 15th January, 1902. *Not Printed.*

No. 53.. Return to an Order of the House, for a Return shewing:—(1) In what municipalities and unorganized districts has smallpox appeared in Ontario since January 1st, 1900. (2) What has been the source of the outbreak in each case. (3) What action was taken by the Government of the Province in the different outbreaks to prevent the spread of the disease. (4) To what extent was vaccination employed in the different outbreaks to limit the spread of the disease. (5) In how many plac s do Isolation Hospitals exist. (6) And whether (a) temporary or (b) permanent. (7) In how many centres in (a) organized districts, and (b) unorganized. Presented to the Legislature, 15th January, 1902. Mr. *Smith. Not Printed.*

No. 54.. Report of Inspector of San José Scale for the year 1901. Presented to the Legislature, 25th February, 1902. *Printed.*

No. 55.. Return to an Order of the House for a Return, shewing what amount, if any, has been received from private parties towards the support of their relatives or otherwise, in the respective Insane Asylums of the Province during the year 1901. Presented to the Legislature 24th January, 1902. Mr. *Hoyle. Not Printed.*

No. 56.. The Birds of Ontario in relation to Agriculture. Presented to the Legislature, 29th January, 1902. *Printed for distribution only.*

No. 57.. Return to an Order of the House for a Return, shewing the number of fruit trees infested by the San José Scale, condemned to be destroyed by the Inspector or Inspectors in the County of Lincoln, the number actually destroyed; the number condemned but not destroyed; the names and residence of the owners of those not destroyed and the reason why not destroyed. Presented to the Legislature, 30th January, 1902. Mr. *Jessop. Not Printed.*

No. 58.. Return to an Order of the House for a Return, shewing:—(1) The amount of bonuses or subsidies voted to Railways by this Legislature, each year during 1898, 1899, 1900 and 1901. (2) The names of each railway receiving the same and the amount voted to each during that time. (3) The amount paid to each railway during each of such years, and the condition or conditions upon which such payments were made. Presented to the Legislature, 6th February, 1902. Mr. *Joynt. Not Printed.*

No. 59.. Also—Return to an Order of the House for a Return, shewing the number of persons confined in the different Gaols of the Province on January 14th, 1902, as indigent persons unable to support themselves, and the length of time each person had been confined. Also, shewing the number of insane persons confined in the different Gaols of the Province on January 14th, 1902; the length of time so confined, and the reason therefor. Presented to the Legislature, 6th February, 1902. Mr. *Barr. Not Printed.*

No. 60.. Return to an Order of the House for a Return, shewing:—(1) Who are the appointees under the Fisheries Department over the Rideau waters. (2) The name and the amount of salary of each overseer and sub overseer between Kingston and Ottawa. (3) The local jurisdiction of each overseer and sub-overseer, separately, as to limit of waters. (4) The number of licenses which have been granted during 1900 and 1901. (5) The name of each licensee and the amount paid for license individually. (6) The other sources of revenue under the Fisheries Department from fishing and otherwise for Ontario, from the Rideau waters. (7) The total revenue and expenditure in connection with the said waters under the Department. Presented to the Legislature, 7th February, 1902. Mr. *Joynt. Not Printed.*

No. 61.. Return to an Order of the House for a Return, giving the name of each License Commissioner in each License District in the Province and the amount of expenses allowed in each District, up to the 30th

April, 1901. The name and salary of each License Inspector in the Province up to the 30th April, 1901, the county for which he was appointed and the amount allowed each Inspector for expenses. Presented to the Legislature, 10th February, 1902 Mr. *Barr. Not Printed.*

No. 62.. Report in the matter of the Scott Enquiry *re* timber. Presented to the Legislature, 13th February, 1902. *Not Printed.*

No. 63. Report on Sugar Beet Experiments in Ontario. Presented to the Legislature, 4th March, 1902. *Printed.*

No 64.. Agreement between His Majesty, represented by the Commissioner of Crown Lands, of the one part, and the Nepigon Pulp, Paper and Manufacturing Company, Limited, of the other part. Presented to the Legislature, 4th March, 1902. *Printed.*

No. 65.. Return to an Address to His Honour the Lieutenant-Governor, praying that he will cause to be laid before this House, a Return of copies of all Orders-in-council, correspondence and telegrams between the Government, or any official thereof, and the McNab Lumbering Company, Peter Ryan, John Bell, John Drynan, and any other person or persons, interested in the company, relating to certain lumber stored at Ingoldsby Station, and the timber dues thereon Presented to the Legislature, 18th February, 1902. Mr. *Fox. Not Printed.*

No. 66.. Return to an Order of the House for a Return, of copies of all correspondence since January 1, 1901, between the Attorney-General, or any officer of his Department, and any other person or persons, relating to the export of gas from the Province under any lease; also, copy of such lease; also, copy of any instructions to, and any report made by Mr. Stiff on the subject since said date: also, copy of any injunction served on the Sheriff of the County of Essex forbidding him to interfere with the pipes of any Gas Company. Presented to the Legislature, 18th February, 1902. Mr. *Whitney. Not Printed.*

No. 67.. Agreement between His Majesty, represented by the Commissioner of Crown Lands, of the one part, and the Sturgeon Falls Pulp Company, Limited, of the other part. Presented to the Legislature, 4th March, 1902. *Printed.*

No. 68.. Agreement between His Majesty, represented by the Commissioner of Crown Lands, of the one part, and the Blanche River Pulp and Paper Company, Limited, of the other part. Presented to the Legislature, 4th March, 1902. *Printed.*

No. 69.. Report of W. T Jennings, Esquire, M.S.C.E., upon the cause of damage by high water and ice in the Grand River at Galt, Ontario. Presented to the Legislature, 25th February, 1902. *Not Printed.*

No. 70.. Return to an Order of the House for a Return, shewing the number of Visiting Committees appointed under the provisions of the Act respecting Neglected and Dependent Children. Presented to the Legislature, 27th February, 1902. Mr. *Smith. Not Printed.*

No. 71.. Agreement between His Majesty, represented by the Commissioner of Crown Lands, of the one part, and the Montreal River Pulp and Paper Company, of the other part. Presented to the Legislature, 5th March, 1902. *Printed.*

No. 72.. Statement of distribution of Revised and Sessional Statutes, up to 31st December, 1901. Presented to the Legislature, 4th March, 1902. *Not Printed.*

No. 73.. Return to an Order of the House, for a Return, shewing what number of Cold Storage Associations have been incorporated: where they are, and what amount was paid by the Province to each of the Associations formed under the Act of 1900, to provide for the incorporation of Co-operative Cold Storage Associations. Presented to the Legislature, 5th March 1902. Mr. *McLaughlin. Not Printed.*

No. 74.. Return to an Order of the House for a Return, a copy of any Report, or other document, made to any Department of the Government by the engineer, or other officer or person, who surveyed the route of the proposed Temiskaming Railway. Presented to the Legislature, 7th March, 1902. Mr. *Beatty (Leeds.) Not Printed.*

No. 75.. Return to an Order of the House for a Return, of copies of all correspondence between any person or persons resident in the Townships of Sunnidale, Flos or Vespra, and the Government or any member or official thereof, relating to the drowning of lands therein caused by the overflow of the Mad and Nottawasaga Rivers together with a copy of the Report of the Engineers upon the cause of such overflow or floods. Presented to the Legislature, 10th March, 1902. Mr. *Thompson. Not Printed.*

No. 76.. Copy of an Order-in-Council commuting the fees of His Honour A. B. Klein, Junior Judge of the County Court of Bruce Presented to the Legislature, 15th March, 1902. *Not Printed.*

REPORT

OF THE

FARMERS' INSTITUTES

OF THE

PROVINCE OF ONTARIO

1901.

PART I.

PUBLISHED BY THE ONTARIO DEPARTMENT OF AGRICULTURE.)

PRINTED BY ORDER OF
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EIGHTH ANNUAL REPORT

OF THE

FARMERS' INSTITUTES OF ONTARIO

FOR THE YEAR

1901.

To the Honorable, the Minister of Agriculture :

SIR,—I have the honor to present herewith the Eighth Annual Report of the Superintendent of Farmers' Institutes.

A SHORT HISTORY OF THE FARMERS' INSTITUTES IN THE PROVINCE OF ONTARIO.

This movement emanated from the Ontario Agricultural College at Guelph. The President of that institution, Dr. James Mills, realized that the Agricultural College was reaching not more than one per cent. of the farmers' sons of the Province of Ontario who were eligible for admission. In addition to these there were the ninety-nine per cent. and the older brothers and fathers who had scarcely any opportunity, except that of the public press, of receiving practical information in reference to their business.

THE BEGINNING.

In 1884 Dr. Mills matured his plans for launching in the Province of Ontario the organization now known as the Farmers' Institutes. The Hon. A. M. Ross was then Commissioner of Agriculture, and he adopted the suggestions of the President of the Agricultural College, and permitted of a change being made in the College vacation, so that the professors would have time during the month of January to devote to this new movement.

At first meetings were planned to occupy one and a half days each. Commencing at 1.30 p.m. the first day, an afternoon and an evening session were held; on the second day a morning and an afternoon session. The day sessions were to be devoted to methods pertaining to purely practical farming, while the evening sessions were to be more popular, and include such topics as would be interesting to the town and village folk. The wisdom of these two-day meetings has been proven in recent years, and while the one-day meeting now predominates, there is a tendency in some counties to revert to at least one two-day meeting each year at some central point, believing that where the delegates stay for a second day in the neighborhood they become better acquainted, the audience becomes more responsive, and time is allowed to discuss thoroughly one or more subjects that may have a peculiar interest in that particular neighborhood. As soon as the scheme of meetings was announced by Dr. Mills it was heartily received and more applications were sent in for meetings than could be complied with.

THE FIRST YEAR.

On January 2nd, 1885, the first delegation for regular Farmers' Institute work started out from the College. At the outset two difficulties had to be met and overcome. The first was, that, being under local Government patronage, there was a certain amount of political prejudice in the air. The second was that each of the gentlemen of the delega-

tion having the word "professor" prefixed to his name, indicated to many that he was thoroughly and purely a book man, and therefore not practical. This latter impression was quickly effaced. The audience soon found that both Dr. Mills and Prof. Panton had been reared on farms and were accustomed to all kinds of farm work ; that the education they had received after leaving the farm had only helped them to solve farm problems which they could never have done without that education.

As the years have gone by the political prejudice has been almost entirely overcome, and we find the members of both political parties vying with each other as to which shall make their local Farmers' Institute the greatest success. Institute officers everywhere are proud of their organization, and of the Agricultural College, from which it emanated.

The Second Year.

The next year twenty-six Institutes were held. The third year forty Institutes were visited, and Dr. Mills found it necessary to engage the assistance of other than professors in order to supply all the meetings asked for. The late John McMillan, M.P., of Huron County, and the late John I. Hobson, of Wellington County, were added to the staff in that year.

The Fourth Year.

In 1888 fifty per cent. more Institutes were held, and the work began to assume considerable magnitude. Several of the leading farmers of the Province had to be called in to assist in carrying on the work. Mr. E. Jeffs, of Simcoe County, Mr. Simpson Rennie, of York, and Mr. John Dryden, of Ontario, all went out in the interest of the work.

The Sixth Year.

In 1890 the Province was divided into seven districts, embracing seventy-five Institutes, and to each meeting three delegates were sent—a professor, a leading farmer, and a leading fruit-grower. This was a decided step in advance, and the delegation was enabled to answer almost any questions that might arise in reference to farm work and farm products.

The Seventh Year.

In 1891 there were ninety-five meetings, divided into eight divisions, so that the Province was now pretty well covered. A great improvement was noticed in the addresses delivered, papers read and the discussions carried on, and it was no longer necessary to emphasize the importance of belonging to a Farmers' Institute.

A Superintendent Appointed.

In 1892, 1893 and 1894 the number of meetings continued to increase in about the same ratio, until Dr. Mills was compelled to call a halt, the work having now reached the stage where it required all of one person's time and attention. On the 1st of October, 1894 Mr. F. W. Hodson, of London, Ont., was appointed Superintendent of Farmers' Institutes for the Province of Ontario.

In the first report of the new Superintendent we find the following points mentioned :

"1. We find now, more than ever before, a great desire among our farmers to know more of the teaching of science as it bears on agriculture. They find science and practice go hand in hand where progress is made. The teacher of science is listened to with rapt attention as he unfolds some of the scientific principles that underlie the operations upon the farm.

"2. We find a greater readiness to discuss agricultural problems. In the early days of the Institute work it took great skill on the part of the delegates to get farmers to take part in any discussions. To-day, as soon as an address is over, many are ready with questions to draw out all that can be learned from the speaker. So marked is this that discussions have frequently to be cut short for want of time.

"3. We note a wonderful increase in the membership.

"4. Farmers are more alive than ever to the necessity of being educated, especially along the lines of agricultural science.

"5. While the professors have done much to simplify and make attractive the teachings of science, they have learned a great deal from the practical farmers at these meetings.

"6. The Institutes have developed a readiness to speak and an ability to express the results obtained from practice in farming.

"7. A higher ideal of farm life has been attained, and a halo of interest has been found to surround it, which can only be seen when men read, observe and study the teachings of science, as the great book of nature spread open before them constantly reveals such."

Since that time the Farmers' Institutes of the Province of Ontario have steadily grown in numbers and the value of the work done, until the report for 1901 shows the total membership to be 20,307. During the year 730 meetings were held, with a total attendance of 131,653 persons. At these meetings 3,262 papers were read and addresses delivered.

Special Features of the Work in 1901.

Women's Institutes.

Two years ago we addressed a letter to the women of Ontario, asking their co-operation in the formation of Women's Institutes. We expected to start in a small way with one or two strong organizations, and from these be able to spread out to all parts of the Province. We were very agreeably surprised to find that, instead of two, there were twenty organized the first year, and we have now in active operation in the Province forty-four live organizations, with a total membership of 2,816 on May 31st, 1902.

The objects of each Women's Institute are :

"The dissemination of knowledge relating to domestic economy, including household architecture, with special attention to home sanitation ; a better understanding of the economic and hygienic value of foods, clothing and fuels, and a more scientific care and training of children, with a view to raising the general standard of the health and morals of our people."

Excursions to the Agricultural College.

Each year during the month of June a number of the Farmers' Institutes have made arrangements to convey their members to the Agricultural College and Experimental Farm at Guelph. Last year there was an excursion each day between the 12th and 30th of June (Sundays excepted), and about 30,000 persons, including farmers and their families, visited the Institution. Our Institute speakers inform us from year to year that where they find a number in an audience who have visited the College they have no trouble in interesting them in scientific agriculture.

Seed Fairs.

A number of the Institutes have adopted the practice of holding a seed fair each spring before planting time, when they bring together samples of the best varieties of grain and grasses for their particular locality. These are exchanged at a uniform rate of 10 cents per bushel above the market price. In this way every farmer in the neighborhood is enabled to secure good, clean, home-grown seed at a reasonable figure.

Generally speaking, the Institute movement is making a steady, upward growth. the membership is increasing at the rate of about 2,000 a year, and the demand for meetings is proportionately great.

I have the honor to be, Sir,

Your obedient servant,

G. C. Creelman,

Toronto, July 1st, 1902. Superintendent.

Annual Meeting of the East York Farmers' Institute and Women's Institute. An Orchard Spraying Demonstration and a Cooking Lesson were the principal features of the meeting.

MAKING CLOVER HAY.

To make hay of good quality involves a considerable outlay for improved machinery, especially if there is any considerable quantity of it to be cured. Mistakes are frequently made by undue haste in haymaking. It is as a rule preferable to coil it, leaving it in this condition for a period of twenty-four hours, rather than store it too soon. The matter of cutting clover when it is dry is important, as is also the storing of the hay without incorporating outside moisture, that is, moisture from dew or rain. There are those who think coiling involves too much labor—who prefer to cut one day and ted and haul the next. The best time to cut clover hay is when the first heads are in full bloom. However, if cutting is delayed until the first heads have turned slightly brown, the curing process will be much more simple, and there will be less danger of having musty hay. These points are brought out in the following letters from men who thoroughly understand the value of well-cured hay and the method of making it.

CLOVER, AND HOW TO CURE IT.

By Henry Glendinning, Manilla.

The clover plant in many respects is the most important of the various plants grown by the farmer. As a gatherer of fertility from the atmosphere, it is the most valuable of all. As a forage plant it takes first place, whether in the green or cured state.

It is in regard to curing it into hay that we will first consider it. The best time to cut the plant for hay is when it is in full bloom, or when the blossoms contain the greatest amount of honey. Cut in the morning after the dew has dried off. That which is cut in the forenoon may be raked up immediately after the noon hour and put into cocks. The mower should not be run later than 4 p.m., and all that is cut should be put into cocks before the dew falls. This hay should be put into the barn next day and well tramped into the mows. This plan can be continued from day to day until all is stored in the barns. Three things we must bear in mind in curing hay by this method: 1. Do not cut in the morning until the grass is dry. 2. Do not allow the fresh cut hay to lie on the ground over night, exposed to dew or rain. 3. If any hay should get wet with rain, let it stand in the cocks until thoroughly dry before taking to the barn.

Q. How long have you followed this plan of saving hay?

A. Only one year.

Q. How much hay did you cure by this method?

A. Thirty-seven acres was treated in this way, except some two or three acres that got some rain; this was allowed to dry out in the cocks in the usual way before storing in the barn. There would be at least from seventy-five to eighty tons of dry hay.

Q. What was the condition of the hay when taken out of the mows?

A. The finest I ever saw. It was as green as when put into the barn, the leaves and blossoms were all attached to the stalks, and it appeared to have dried out without much heating, as all of the alsike blossoms were pink and the red clover blossoms were from a pink to a light amber color.

Q. Do you think there is danger from spontaneous combustion?

A. When hauling to the barn the men I had working at it predicted it would all heat and spoil, and that we would have to haul it all out for manure, or that it would burn the barns down. I kept a very close watch upon the mows, but could not discover any heat. I am of the opinion that there was but very little heat developed. If it had done so the blossoms and leaves would have been of a dark brown color.

Q. Did you use salt, lime or any kind of a preventive on the hay?

A. None whatever.

Q. Were there any signs of mould ?

A. No signs of mould, and the freest from dust we ever had.

Q. Did you use a tedder ?

A. No, but I think it would be an advantage to use one, as the hay could be made drier before putting it into cocks.

Q. What did your hay consist of ?

A. Red and Alsike clover, with a little timothy.

Q. What size were your mows, and were they close ?

A. Two of them are 22x25 feet, with an average depth of 30 feet of hay, with the exception of a granary in one mow, 19x22 feet, 8 feet high.

These mows are tight floored with double inch boards, over basement stables. Another mow, 24x36 ft., with an average depth of about 24 feet. The floor of this mow is on the ground. The outsides of all the mows are inch boards, without battens, with cracks between the boards which will average about 3-8 of an inch, just such as are usually found in the average barn. The sides of the mows next the drive-floor were open. The hay was equally good in all parts of the mow.

Q. Do you know of any other persons saving hay by this process ?

A. I know of three men who have followed this plan for at least three years, with good success.

Q. What are the advantages of curing by this plan over the one usually followed ?

A. The advantages of this plan are that the time between cutting and storing in the barn is very short. (A farmer can tell pretty well by the general appearance of the weather, consulting a good barometer and the weather probs. in the morning papers, whether he stands a chance of getting his hay in before showers come up.) Also all the leaves and blossoms, which are the most valuable portion of the plant, are left on the hay. By the old process a great many of these are left in the field. We found this hay cleaner and brighter than any we have had by the old way.

Q. Will you give the comparative food values of Red Clover hay with some of our other feeding stuffs ?

A. If we take the digestible nutrients as found by analysis and apply the values laid down by Dr. Wolff, the German scientist, we will obtain the following results :

Red Clover hay	$13.24 per ton.
Timothy hay	11.17 per ton.
Oat straw	8.54 per ton.
Wheat straw	7.15 per ton.
Wheat bran	18.97 per ton.
Wheat shorts	21.80 per ton.
Oats (grain)	19.23 per ton.
Barley (grain)	20.04 per ton.
Wheat (grain)	21.97 per ton.
Corn (grain)	21.76 per ton.

We must remember that these are only comparative values, and that the best results can only be obtained by feeding a properly balanced ration. Few of our feeding stuffs are properly balanced, but red clover is an exception, it being about the proper nutritive ratio for growing animals. All of the clovers contain a large amount of flesh or lean-meat-forming material.

Q. Will you tell us something about the fertilizing value of the clover plant ?

A. All of the clovers belong to the leguminosae, or pulse family, the species of which have the power of extracting nitrogen from the atmosphere. This is the most valuable element of fertility for plant growth.

Q. How is nitrogen obtained by the clover plant ?

A. By the action of certain species of bacteria in tubercles that are attached to the roots of the plant, these minute organisms have the power of extracting the free

nitrogen from the air and converting it into the form of nitrates, and in this way it is made available for plant food.

Q. Has timothy, and such grains as wheat, barley and oats, the power of extracting free nitrogen from the air ?

A. No, these plants take their nitrogen only from the soil, where it has been deposited by rainfall, from decomposed animal and vegetable matter, and from the products of the oxidation of nitrogen through electrical action and combustion.

Q. Is there any danger of exhausting the supply of free nitrogen in the atmosphere by growing too much clover ?

A. It has been estimated that the air contains about 77 per cent. of free nitrogen by weight. That being the case, we need not trouble ourselves about the supply running short.

Q. About what weight of the clover plant is left in the field after the crop is cut ?

A. Sir J. B. Lawes, of Rothamsted, England, found that in the autumn, after the last crop of clover was cut, that remaining above ground and to the depth of 72 inches was examined, and found to contain 6,152 pounds of dry matter per acre.

Q. Will you give the comparative fertilizing value of red clover hay with some of our other common feeding stuffs ?

A. Taking the analysis of a few of our grains and feeding stuffs, and computing the value of nitrogen, phosphoric acid and potash at the prices set by the Inland Revenue Department of Canada in the valuation of commercial fertilizers, viz.: Nitrogen at 13 cents per pound, phosphoric acid and potash each at six cents per pound, according to these values, we would have the following results :

Red clover hay	$8.47 per ton.
Timothy hay	4.99 per ton.
Wheat straw	2.29 per ton.
Oat straw	3.34 per ton.
Wheat bran (spring)	12.34 per ton.
Wheat shorts	9.66 per ton.
Oats (grain)	7.08 per ton.
Barley (grain)	5.45 per ton.
Wheat (winter)	7.93 per ton.
Peas (winter)	10.18 per ton.

If we consider the feeding and fertilizing value of red clover combined, it is very evident that the farmer makes a great mistake in selling clover hay at the usual market prices obtained, which is frequently less than the fertilizing value alone. This hay should be fed to stock for the production of good horses, beef, mutton or dairy products, so that when sold it will make the maximum profit with the minimum fertility removed from the farm.

Q. What loss of fertility is there in feeding clover to animals, compared with plowing the same under ?

A. Harris, in his talks on manures, says: "I prefer to make the clover into hay and feed the animals, as they seldom assimilate more than from five to ten per cent. of all the nitrogen furnished in the food and less still of mineral matter.

Q. Do you advise plowing clover under for manure or feeding the hay to animals and applying the manure afterwards to the land ?

A. Prof. W. J. Beal, of Michigan Agricultural College, says : "If the stubble and roots contain more than half of the manurial value of red clover, and if live stock appropriates only five to ten per cent. of the nitrogen, and the other ninety to ninety-five per cent. goes back to the field or dung heap, it certainly must be the best practice, as a rule, to feed red clover instead of plowing under." If we are to obtain results such as these the manure must be properly taken care of, either applying it to the land when fresh made, or kept in a shed, where it is well tramped down, until it is hauled to the fields.

SOME PRINCIPLES TO BE OBSERVED IN CURING CLOVER HAY.

By Richard Gibson, Delaware.

We have no rule for hay-making; it varies with conditions. There are certain principles that must be observed, however, such as cutting when free from atmospheric moisture, as dews and rains; then partially curing in swath and finally in cocks. There are some seasons in which most any one may have good hay, especially if the crop is light. Again, there are wet seasons that baffle the most shrewd and set all rules at defiance; for example: one season I had over four hundred acres of grass to cure. The weather was very catchy, raining most of the time. I cut all through the rain, until I had over seventy acres cut; a break in the clouds let forth the sun, four tedders were put to work, and every available man, with a fork, was turning the clover swaths. The result was 145 loads of splendid hay, all in the barns before the rains again came down. My neighbors, who waited for the weather to clear up, got caught, for we had another week of rain when we were cutting, and their hay was much of it entirely spoiled. Grass is not hurt with rain, but made hay will yield up its strength, even as tea does in the teapot; this is merely to show how circumstances vary the application of any rule—not to advise cutting grass in rain.

Our usual practice is to cut as soon as clover is sufficiently matured; heads fully in bloom and the early ones turning brown. If the sun is very scorching the swaths are turned by hand, so as to expose the green under part to the dew, and preserve the leaf of that wilted. This operation may be delayed until next afternoon, but it is nearly always considered necessary if a first-class article is desired. With our heavy crops the under side of the swathe would remain green for days, unless exposed to the sun, while the upper would be so dry and brittle that neither head nor leaf would be preserved. We study the weather and get into cock earlier than we like if threatening, but we aim to get it all nicely wilted before cocking, with none of it so dry as to break. Of one thing young beginners need not fear, that is putting in too green; let there be no atmospheric moisture, and if sweated in the cock it may be stacked very green.

CURING CLOVER FOR SHEEP.

By John Campbell, Woodville.

I will endeavor to give our method of curing clover, and the ideal condition we aim to secure. The crop is cut when in full bloom, and before the heads begin to turn brown. If possible, cutting is done when the ground is dry, and when the crop is free from dew and rain. When very heavy the swaths are turned, when the upper side is wilted, but not so dry as to have the leaves fall off. The rake is started when the hay is about half made, and if the weather is favorable it remains in the windrows a short time to allow further evaporation of moisture, when it is carefully coiled, pains being taken to put it up so as to shed rain, should it be caught by unexpected showers. With good weather we have opened out the coils the following afternoon, and after a few hours' exposure to sun and air, hauled it in the same evening. But we prefer allowing it stand a day or two, and, if sufficiently dry, haul it directly without spreading. The less exposure to the hot sun, dew or rain, the more of the nutriment and aroma are preserved. While we aim to prevent having the hay so dry and crisp as to lose much of the leaf and fine parts in handling, we try to have it only partly sweated in the coils, so that when stored in the mows there will be further fermentation, but not sufficient to cause mould. When stored in the proper condition it will retain considerable of its natural moisture, and when fed out the hay will be tough and soft, brown in color, and have that fragrance and appetizing aroma which you mention.

If clover is left uncut, as many do, until the bloom turns brown, the stem becomes woody, much of the finer and most valuable parts are lost in the curing and handling,

and, should it be caught out in heavy rains, it is really of comparatively little value. When cut in the early stages of bloom, rain does but little harm, if tedded soon after a shower and put up before it gets too dry.

Of course the ideal weather for clover haymaking would have neither dew, nor rain, nor much hot sun, but the air sufficiently dry to cause rapid evaporation. Then it would be difficult to spoil the crop, if cut in time; but with the uncertainties of weather it requires constant watchfulness to guard against, the loss of nutriment in saving clover, which is one of the most valuable products on the stock farm.

CLOVER HAY IS BETTER TOO GREEN THAN TOO RIPE.

By John Jackson, Abingdon.

To make first-class clover hay, and there is no other hay its equal, it should be cut when in full flower. When there is a large quantity to handle, begin several days earlier ---(better too green than too ripe)—and especially if the weather is favorable for curing.

Cut late in the day, to be put up on the following day—or it may be cut in the morning, as soon as the dew is off, to be put up the same day. When a little wilted, shake it up well; this is best done with the tedder, late in the afternoon. When the heat of the day is past, rake and put up in small cocks, which should be turned bottom up every evening till sufficiently cured to put into the mow. In bad weather caps would be a great advantage. It is hardly possible to make the best clover hay and preserve the leaves, without curing in the cock. Much depends on just the right sort of weather.

SHOULD BE COILED UP GREEN.

By Arthur Johnston, Greenwood.

We count on cutting our clover when in full bloom, and we begin when the clover is quite dry. I mean in the forenoon. If the day is fine we put the hay tedder on after dinner, and if the day is still fine we put it in coils (moderate-sized coils) about 3 o'clock or a little later. We never put it in coils when there is the slightest dew or rain on it. We frequently take it into the barn next day if the weather remains fine. I think it would be better longer in coil if the weather were settled. I do not like putting in the barn sooner than a day after being coiled. Clover only needs to be free from all dampness to be put in coils, even if very green. I am certain any kind of hay is better of being coiled, even timothy, when it is raked up dry and put into the barn, you have dry grass, but not made hay.

CUT ONE DAY AND HAUL IN THE NEXT.

By R. S. Munson, Glencoe.

My plan is this :—Commence to cut as soon as the dew is dried off the grass. As soon as we get an acre or so cut we start the tedder. We are anxious to have the hay tedded before noon. Immediately after dinner we commence to rake and cock. The next morning, if the weather is fine, we turn out these cocks to expose them to the air and sun for a short time, then commence to draw the hay in. We have never put any in stacks. We put away about forty tons in this way last haying, with good results. In fact, this has been our plan for some years, and our hay is very much better than when cured in the old way. I had a sack of my hay on exhibition at the Glencoe Institute meeting, and the farmers were delighted with it. I do not think there is the least danger of spontaneous combustion, and as for musting, it will have to be put away very much greener than ours if that happens.

IN A DRY SPELL IT IS PERFECTLY SAFE TO CUT AND HAUL IN THE SAME DAY.

By W. C. McGregor, Tilbury.

The system of curing clover hay green has been given special attention on this farm for the past six or seven years, with the result that it has been a success in every particular. The most favorable weather for this method of curing is very hot and dry. When the clover is well matured, the blossoms are dry and the largest number in full bloom, the hay may be cut. In case of a very heavy crop it is well to ted it so that the sun may get at all the hay. When it has dried three or four hours, rake it up and haul it into the barn or stack; the larger the mows the better. However, if the weather previous to the cutting of the hay has been wet, or if the weather at time of mowing be of a damp rather than drying nature, more time should be given for drying.

In case the hay gets wet with rain, it should be thoroughly dried before drawing. Again, if the hay is cut greener than has been previously stated, it will require more drying.

The mower should be used every day, and cut only what can be hauled in one day. The hay should not be allowed to get so ripe that it will become hard and brown, and will not be relished by stock.

The advantages of this system of curing clover are : 1. Quicker curing, lessening the danger of damage by rain. 2. Avoiding the loss of leaves and blossoms, which is the important part of the plant. 3. A better color and quality of hay throughout, some of the hay being nearly as green as when cut.

In my experience I do not know of any fire caused by the heating of the hay. My experience has been exclusively with red clover, except odd bunches of alsike, which will occasionally occur in any hay. However, these bunches were equally good hay, and I have no reason to believe that the same plan would not work well with alsike clover.

Although I have given this as a system, no cast-iron rule can be made, and judgment must be used in all cases. There is no more danger from foreign dampness, such as rain or dew, than from the greenness of the hay, but care should be taken in all cases, and probably the first hay cut in the season might be given one day to dry.

If this system of curing clover hay has any disadvantages I have not yet discovered them.

AMERICAN OPINIONS.

In order to secure opinions and experiences from as many reliable sources as possible, a circular letter was addressed to each of the Directors of Agricultural Experiment Stations in the United States.

We submit a copy of that letter, and also the replies received. It will be noticed that here again authorities differ, but we submit the whole discussion, with the hope that out of this free expression of ideas our Institute members may receive much useful information :

Dear Sir,—Will you kindly give me all the information you have in regard to the plan of putting clover hay into barns or stacks in a partially green condition, instead of allowing it to cure in the cocks in the usual way. What are the advantages or disadvantages of the system ? Do you think there would be danger of spontaneous combustion, or of heating or spoiling in the mow or stack ?

A number of our Canadian farmers have reported good success in curing clover almost green, but before recommending the system I should like to have the results of your experience.

G. C. Creelman, Toronto.

STORED IN LESS THAN TWENTY-FOUR HOURS AFTER CUTTING.

By A. D. Shamel, Professor of Agriculture, University of Illinois.

I will say that our farmers have followed the practice of putting up clover hay green for the past five years, with universal success. The clover is usually cut down in the evening, allowed to wilt the next morning, and stored in the mow in the afternoon. This process prevents the loss of leaves after the ordinary process of curing, and places the hay in the very best possible condition for future use. When this hay is taken out of the mow it comes as fresh and green as the day it was put in, without any dust or mould. The only precaution that seems necessary is to keep the mow as tightly closed as possible for a few days after the hay has been stored in the barn, and until the heat from the processes of fermentation has disappeared. There have been some cases of spontaneous combustion reported, but these are usually the results of storing partially green hay in stacks, rather than the green hay directly from the field.

CUT, CURE AND MOW AWAY THE SAME DAY.

By Prof. Frank E. Emery, M.S., University of Wyoming.

It has been reported many times that not only clover, but hay of mixed grasses, has been cured very satisfactorily by mowing after the dew is off, raking as soon as dry enough to gather up readily, and mowing away immediately. Hay cured in this way by me several times has come out in fine condition. There is likely to be less waste from this method, less work and more expedition, which in the curing of hay are very desirable considerations.

ALFALFA COILED IMMEDIATELY AFTER CUTTING.

By Luther Foster, M.S.A., President, New Mexico College of Agriculture.

While connected with the Utah Experiment Station as Director, this method was tried with alfalfa, but in every instance the hay was darkened in color and became very dusty, so much so that it was not safe to feed it to horses. Cattle seemed to eat it as well, if not better, than that properly cured. No analysis was made of the hay in its changed condition, so I am not able to say what the composition was in comparison with that not so treated. I followed a system of curing alfalfa in Utah, and later in Wyoming, that proved very satisfactory, but perhaps would not be suitable for your climate. By this method the alfalfa was bunched immediately after it was cut, even before wilting. These bunches were left standing in the field five or six days to cure. They were made rather small, so they could be thrown on a wagon in a single forkful when cured. By this method the leaves were nearly all retained, and the hay neither bleached nor sunburned.

NO DANGER FROM SPONTANEOUS COMBUSTION.

By Wm. Stubbs, Ph.D., Director State Experiment Station, Louisiana.

We have not had much experience in putting up clover, as we grow only about an acre of this crop each year, but have had considerable experience in curing alfalfa, cow peas, etc. If, in this climate, the alfalfa is cut early in the morning, after the dew is off the ground, kicked once or twice during the day with a tedder, raked late in the afternoon, and packed away in a perfectly tight barn, the doors and windows carefully closed, alfalfa can be cured in a beautifully green condition. We have had no success in curing

it green in the stacks; while the interior will be green, the exterior will be exceedingly dark. Nor can we recommend this method to those who have open barns. I do not think there is the least danger from spontaneous combustion. In fact, by this process, with its moisture below 20 per cent.—(with us it is as low as 20 per cent.)—and with a small access of air, being packed down almost in the closed barn, there will be no danger whatever from spontaneous combustion, heating or spoiling in the mow or stack.

TAKES THREE DAYS TO CURE CLOVER HAY.

By Dana H. Morse, Hillside Farm. Randolph, Vermont.

I raise quite a large quantity of hay, a considerable portion of it being northern red clover. I cut it early and put it into a close-made barn, in large, deep, compact bays, in somewhat of a green condition, but never wet. I do my haying quickly, and fill a bent from bottom to top in a short time, giving no opportunity for sweating until the bay or bent is filled. I rarely get in clover hay until the third day from cutting—mowing all my grass late in the afternoon, when both ground and grass are dry. I handle clover as little as possible, and hence suffer little loss of leaves. Rake in small windrows about noon the next day, after mowing, if weather is fair. Put it in small cocks just before dew falls. Next day about 10 o'clock open in small forkfuls and cart to mow in afternoon. If the weather is good it will be well cured, but not dried and leafless.

If packed solidly in a tight barn, with doors opened only when putting in hay, it will come out of mow green and nutritious. The top of the mow to a depth of six or eight inches will be black and smoky, but the balance I find to be the best feed I can produce for stock, especially for the dairy cow. The nearer your place for storing hay approximates the silo, the greener you can cure your hay.

If green clover be put into loose barns, allowing each layer to get to sweating before more is put in, poor food will be the result, if not spontaneous combustion. In other words, conditions make the difference between good and poor food. I could not advise putting in green clover hay unless the above conditions were carefully observed and adhered to.

TWIST A HANDFUL OF HAY; IF NO SAP RUNS IT IS READY TO HAUL IN.

By W. F. Massey, Horticulturist, North Carolina College of Agriculture.

The storing of clover and pea vine hay in a partially wilted condition has been practised by me for over twenty years, with perfect success. I have heard talk about spontaneous combustion, but my impression is that where there have been genuine instances of this they resulted not from the green hay itself. I have never known anything like combustion in green hay, and I have had barns of it in a very hot condition. With clover and any other legume the hay is much better if the leaves are preserved, and the hay is cured with as little exposure to the sun as possible. I cut clover in the morning as soon as the dew is about dried off, and start the tedder after the mowers, so as to wilt the hay as rapidly as possible. Stop cutting at 2 p.m. and get all cut that day into winrows in the afternoon. Next day open up the winrows to dry off and put into cocks as soon as dried. The next day haul into the barn as soon as the tops of the cocks are dry, and pack away closely. My test is the old one of twisting a handful of the hay, and if no sap runs to the twist it is ready to go in. I treat our cow pea hay in the same way, except that it should stay a little longer in the cocks, and is not damaged by rain as clover is. I cure cow pea hay in this way every year, and always have good hay.

MAY BE CURED GREEN IF STORED IN LARGE QUANTITIES.

By Wm. P. Brooks, Professor of Agriculture, Massachusetts Agricultural College.

Our barn has very deep bays, the hay being put in from an upper floor in the barn. The distance from that floor to the lower floor is 23 feet. We often fill 8 or 10 feet above the upper floor, making a mow some 30 feet in depth. These bays have a ground plan 23 by 13 feet. In putting in hay it is our usual plan to fill continuously and rapidly into one hay. We not infrequently put in 15 to 20 tons daily. It has frequently happened that we have put in hay, mixed grass and clover, very much undercured. I find that this hay comes out in splendid condition for feeding. It is dark brown in color, has little luster, fe ls moist or greasy to the touch, is entirely free from dust or mildew, and has the fragrance of old honeycomb. This is, I suppose, what the Germans know as "brown hay." It is only at the middle of the mow that the hay comes out in this condition. Near the outsides it is of the ordinary character. We have many times tried this brown hay, in comparison with hay of similar quality, cured in the ordinary way, placing both kinds before animals together. Under these circumstances they never fail to greedily pick out the brown hay first. A chemical analysis which I had made showed the brown hay to contain a higher percentage of the more valuable nutrients than the hay cured in the ordinary manner. It is more pliable and softer in texture than the ordinary hay, and, it would seem, must be equally or more digestible. We have not, however, any comparative tests as to the digestibility.

The advantages of putting in hay but partially cured are, in the case of clover, a saving of the leaves and blossoms, which crumble, and, in the case of any kind of hay, great reduction in the danger of damage from bad weather. I should never hesitate with impending bad weather to put in a lot of half to two-thirds made (in the ordinary sense) hay, provided it could be stored in large bulk, so that it will be settled by its own weight and exclude the air to a large extent.

I do not feel equal confidence in such material keeping well in a stack, for the air could not be as perfectly excluded, and where the air is not excluded it seems to me the hay is likely to become mouldy and dusty.

Hay put in green will, of course, heat in the mow, but I have seen no good evidence that such treating leads to spontaneous combustion.

CURING OF ALFALFA.

By John Fields, Director of Experiment Station, Oklahoma.

I am unable to give you the results of experience in putting up clover hay in a partially green condition. This plan is, however, followed with success in the growing of alfalfa. The general practice is to rake the alfalfa into winrows very soon after mowing, and later to place it in small piles before it has become brittle. It is allowed to sweat in the piles and is put into stacks while still somewhat tough, but not juicy. In this way the leaves are saved, and the resulting hay is bright and much better than if allowed to dry completely in the sun.

WOULD ADD SALT.

By I. P. Roberts, Director, Agricultural Experiment Station, Itaca, N.Y.

Some years since we put quite an amount of clover hay in the barn when about half cured. It got extremely hot, and I was fearful that spontaneous combustion would take place. To prevent this we cut holes about three feet square in the mow, down to the mow boards. This afforded opportunity for the hay to cool down, but notwithstanding it was quite mouldy. I suppose some would say that the hay should have been left to

cure without the holes. However, I think I did right, for since that time I have put clover hay in the mow when quite green, and invariably three or four inches at the top of the mow rotted. In other words, it was little better than silage. True, one can put clover hay in the mow quite green, provided it is put in hot and is salted heavily. The salt arrests the heating and tends to prevent moulding and gives more time for moisture to escape, that is, it prevents the heating from going on too rapidly. So much for our own experience.

At State College (Agricultural), Pa., they put second cutting of clover, greenish, in the mow, and it resulted in spontaneous combustion. There is not the slightest question but that the hay was set on fire by heat generated from decomposition. I need not go into further details of this case. The barn was saved, however, by knocking out one side of it, removing the hay, and while doing so pouring a heavy stream of water into the mow. We have a sample of this hay, and have all the details, so that we feel there can be no mistake about it.

The mowing of half-cured clover hay is no new thing. The system springs up every little while and dies out. Occasionally it is successful. More often it is a failure. Those who recommend this practice always recommend also that the material be put in a tight bay, where it is not so likely to mold as where it is piled loosely in a barn full of cracks.

I think it all comes to this, that it is a method of dry ensilaging clover, which, under rare circumstances, may be entirely successful. Moreover, I cannot recommend it, or, if I did, I would make an air-tight silo and have done with it.

THINKS IT A FOOLISH PRACTICE TO STORE HAY GREEN.

By W. H. Jordan, Director, New York Agricultural Experiment Station, Geneva, N.Y.

If this system has any advantages, it consists only, so far as I can see, in removing the danger of loss of the leaves when thoroughly dried in the field, and diminishes the chances somewhat of injuring the hay by rain. There is, of course, less handling in the field, but that is fully offset by the handling of a much greater weight when the partially green material is put in the mows. The inevitable fermentation which must ensue when partially green material is put in mows results in a serious loss. Such fermentation is maintained by the actual combustion of dry substances of the hay, which otherwise would serve nutritive purposes. This fermentation does not secure any compensating results, because the fermented material is probably less digestible than the well-cured hay, and the material which is digestible certainly can have no value superior to that digested from the well-dried material. In characterizing the curing of green clover in mows as a foolish practice I express my own convictions.

WOULD NOT WORK IN SOUTH CAROLINA.

By J. S. Newman, Vice-Director, S. Carolina Experiment Station, Clemson College.

Much depends upon the stage of maturity at which the clover is cut, but in this climate the plan you suggest will invariably result in the rotting or moulding of the hay. Conditions in Canada are so different from ours that my experience is not of value to the Canadian farmer.

TOO MUCH LABOR IN HANDLING GREEN HAY.

By G. C. Watson, Professor of Agriculture, Pennsylvania State College.

We aim to cure our hay quite well before storing it. While we had a fire a few years ago which was supposed to have been caused by spontaneous combustion, yet of course one cannot be quite sure until spontaneous combustion has been proven experimentally

with hay. The conditions so far as known tended to confirm this belief. The mow of hay was found to be on fire before a blaze was started. Students and workmen pitched the mow of hay out of the barn, and the barn was saved, although the hay was practically a total loss. The insurance company paid for twenty-three tons, at $11 per ton. I estimated that the mow contained about twenty-nine tons.

Situated as we are, we could not, under ordinary conditions, find it profitable to store clover in a green condition, on account of the extra labor in handling the green material. I am aware that some of the farmers are practicing storing clover in a green condition and tightly closing the barn. These conditions somewhat nearly approach those of the silo, and it is claimed that fermentation does not progress very far.

AFRAID OF SPONTANEOUS COMBUSTION.

By E. A. Burnett, Director, Agricultural Experiment Station, University of Nebraska.

In our section of the country it is not safe to put clover into barns in a very green condition, as I have known of two instances this year where alfalfa, which is similar in its nature, has charred to such an extent as to greatly reduce the value of the hay, and to make the danger from combustion exceeding great. I think this is a matter of detail that can never be entirely settled by advice, as it is impossible to describe exactly any particular condition of the hay as indicative of the degree to which it is cured.

MUST BE FREE FROM EXTERNAL MOISTURE, AND EVEN THEN IT WILL SOMETIMES SPOIL.

By C. D. Smith, Professor of Agriculture, Agricultural College, Michigan.

I have no definite statement on file in my office as to the plan of putting clover hay into barns in a partly green condition. In a tight barn, with the mows small, so that in the rapid drawing of the hay we fill the bents some 15 or 20 feet in a day, I have had excellent success. In every such case I have taken pains to have the clover dry as far as external moisture is concerned, and the juice quite largely evaporated, but with the clover stems still tough. In all such cases the barn has been practically air tight. Following this system I have had the clover hay come out in the spring beautifully clean and perfectly sweet. Following this system, too, but making some mistake which I could not define, I have had the hay come out mouldy, dusty, and in bad condition for the stock. Where everything goes right the system works well, but it admits of no latitude for error. Otherwise there would be no danger of spontaneous combustion, and there is always danger in a mow or stack. On my farm, when I am absent, I require the man to dry the clover hay very thoroughly and never to haul it when there is either dew or the slightest amount of water from rain upon it.

MUST BE WELL CURED IN THE COIL.

By S. Fortier, Director, Experiment Station, Montana.

There is much more alfalfa raised in this State than clover hay, and the custom with the former is to cut, permit it to lie at least half a day, then rake it when green into windrows and bunch it. It is then permitted to cure in the bunch. Occasionally these are turned over. By following this method the leaves, which are the most valuable part, are retained on the stems. We treat our mammoth and red clover in very much the same way.

SPONTANEOUS COMBUSTION.

By J. T. Willard, Director, Kansas State Agricultural College, Manhattan, Kansas.

A number of farmers in this State experienced very disastrous results in the spontaneous combustion of alfalfa last year, and they attribute it to having stacked it too green. The spring was unusually wet and the alfalfa more succulent than usual. Spontaneous combustion occurred in some eight or ten instances, I think, in this vicinity, and no case of it had ever been known before.

CATTLE EAT EVEN MUSTY, BAD-SMELLING HAY THAT WAS PUT IN GREEN.

By Frank D. Gardner, Porto Rico Experiment Station.

I have always had the best results by allowing the hay to cure in the cock. While at the University of Illinois we filled a large barn with a mixture of clover and timothy hay which was not thoroughly cured. It became very much heated, and a few days after the mow was completely filled, the barn took fire and was completely burned. It was thought at the time that most probably the fire was caused by spontaneous combustion, due to the heating of the hay. There was no doubt that the fire broke out in the mow, but there was a bare possibility that it might have been caused by a shaft from a windmill which was used for grinding feed in the barn, and which had been in use a short time before the fire broke out. Clover hay put in the mow or stack in the partially green condition has always come out with more or less mould, and the greener it was the more mouldy it became. We once made a stack of green clover, taking it from the field as soon as cut, so that it had time to wilt only a very little. The stack settled in a remarkable way and became very hard. Thermometers placed in the stack three or more feet from the edge showed a remarkably high temperature, going up, as I remember it, to about 170 degrees. Several months later, when the stack was opened, for about two feet in from the edges the material was almost white with mold, but all the central part was of a dark brown in color, and musty to the smell. In taking it from the stack it pulled off in large thin layers, showing the great pressure to which it had been subjected, owing to the enormous weight of the material, having been put into the stack in the green condition. Notwithstanding its very bad smell and musty appearance, cattle ate it ravenously and almost entirely.

CLOVER.

By T. H. Mason, Straffordville.

The value of the clover crop to the farmers of Ontario is very generally recognized by all of us.

As a Stock Food. The plant, being rich in nitrogenous or flesh-forming material, is especially well adapted for forming part of the bulky portion of the ration, and in this way is very valuable for feeding along with corn in any form, as the corn plant is deficient in these important constituents.

As Manure. As a soil renovator, clover plays a special part in Ontario agriculture. It possesses in an especial manner the power of converting the free nitrogen of the air into soluble nitrates suitable for plant food, and for storing them up in tissues of the plant Being a deep-rooted plant, the roots penetrate deeply into the subsoil, opening it and rendering it more porous and drawing stores of fertility to the surface for the use of shallow-rooted plants. The necessity of having a crop of this character to keep the soil in proper mechanical condition and to add humus to the soil, thereby increasing its actual fertility and its water-holding power, is admitted by nearly all of us. Our leading agricul-

tural authorities all tell us to sow more clover, and we believe this advice to be scientifically correct, but if they would only tell us how to make it grow after we have sown it, they would be conferring a great favor to many in Southern Ontario.

Obtaining a Catch. We find in many sections of this Province that, owing to local conditions, such as reduced rainfall, soils deficient in fertility and water-holding power, here is a constantly increasing difficulty in obtaining a catch of clover. This is especially true of the belt of country lying along Lake Erie and the Niagara Peninsula. While there has not been much difficulty experienced on rich, deep loams in getting a catch by following ordinary methods, yet in sandy, gravelly and heavy, hard clays it has been almost impossible (during the last four years) to get a catch. Our rainfall during the growing months of June, July and August has been under three inches, and one year under two, so it may be understood what conditions we have had to face. A synopsis of the numerous conditions that have come to my knowledge my prove of some service to the country.

Preparation of the Land. As to previous conditions of cultivation, the best general success has been obtained on land that has been ploughed out of sod, manured, and planted with corn or root crops, kept extremely well cultivated and not ploughed that fall, but cultivated in the spring thoroughly, and not more than two inches deep, and a grain crop sown very sparingly, using not more than one bushel of seed per acre. After the seed is sown, if the land is in good shape, roll, and then go over it with the harrow or weeder, to make the surface fine and prevent evaporation. By this plan the largest possible amount of humus from the rotting sod and manure is rendered available. The soil, by the previous thorough cultivation made thoroughly compact, capillary attraction with the subsoil moisture well established, and then by the shallow cultivation given in the spring, broken off near the surface, rendering the moisture available to the young plants while they are yet small, is a plan that has given very fair satisfaction, although not always successful.

In Case of Failure. When we meet with failure, as we sometimes do, then the most satisfactory plan to be adopted is as follows: As soon as the harvest is taken off, plow with the common plow, or gang plow, very lightly, not more than three inches deep, rolling and harrowing each day's work before leaving the field at night, to prevent loss of moisture. Usually late in August there will be late showers, and by watching chances and sowing clover and timothy alone, excellent catches are secured. Our experience of this plan has been so satisfactory that many of our farmers are not sowing in the spring at all, but prefer to take their chances in the fall. Sowing in this way should not be done later than September 10th, so that the clover plants may get a good strong start before winter sets in. Sowing in the stubble and harrowing in after a partial failure is sometimes resorted to, but unless the season is exceptionally favorable, it is not usually successful. We find it better to plough up and reseed the whole field.

With Fall Wheat or Rye. Some farmers have been quite successful (on light soils) in sowing clover in the autumn with fall wheat or rye. In order to succeed, the land should be in a good state of cultivation, and the seed should be sown not later than the first week of September, preferably a good deal earlier. Better results are given when a light seeding of grain is used.

Without a Nurse Crop. Where none of the above methods have succeeded, owing to poverty and dryness of soil, such as on sandy and gravel ridges, or run-down fields, then sowing in the spring on well-prepared, firm land, without crop of any kind, and with a top dressing of barnyard manure, will almost always succeed.

DISCUSSION.

Q. What is the cause of clover getting musty in the mow ?

A. Andrew Elliott, Galt : The most common cause of mustiness is external moisture, either dew or rain. The coils will also absorb moisture from the ground, and ought to be turned over an hour before drawing.

Q. Do you put clover in coils to cure ?

A. Yes.

Q. How long do you leave it ?

A. Draw as soon as possible ; take no chances.

Q. How much seed to the acre ?

A. Nine lbs. red and 1 lb. alsike.

Q. How long do you leave a field to clover ?

A. Clover is a biennial. It requires one year to start ; the second it is cut as hay and turned under in the fall.

Q. At what stage do you begin cutting clover ?

A. When one-third of the blossoms are out. We often begin just when we ought to finish.

Q. Why is it we get such dirty and weedy seeds—clover and timothy particularly ?

A. As a rule, farmers follow the practice of buying cheap seed, which in most cases is cheap and dirty. Buy only from reliable seedsmen, and insist on having the best, and that absolutely clean, and be willing to pay a price so that you will get it.

Q. Is clover hay as good for horses as timothy ?

A. W. S. Fraser, Bradford : Yes, if properly cured and not fed in large quantities.

Q. When should clover be cut ?

A. Cut in the forenoon, after the dew has dried off. Put in coils in the afternoon, and after two or three days open and expose to sun for an hour or two, when it will be fit for the barn.

Q. Does it pay to grow timothy hay ?

A. Not when we can grow clover. I do not see why farmers persist in growing timothy.

Q. Does it pay to feed timothy hay to cattle ?

A. It is poor food. For sheep it is an expensive way of starving them.

Q. Will clover grow from year to year if the land is properly drained ?

A. Red clover is a biennial, and we cannot expect it to continue from year to year. It should be plowed up the first autumn after the crop is removed. Have another field sown with clover.

Q. Do you feed clover hay to horses ?

A. Andrew Elliott, Galt : Yes, but do not overfeed. It is so rich a food that there is danger of over-feeding.

Q. How do you secure a catch of clover ?

A. 1. Have the surface soil rich.

2. The whole soil mellow and compact.

3. Sow 9 pounds of red clover and 1 of alsike per acre.

4. If spring crop, sow grain thin—one bushel per acre. Harrow in seed.

5. If on wheat, sow early in March in order that the spring rains and frosts may cover the seed.

6. Sow 50 pounds of plaster of Paris per acre.

7. Do not pasture in fall unless very rank.

Q. Relate briefly how you manage your hay ?

A. 1. Begin cutting when half of heads are out in bloom.

2. Cut after dew is gone.

3. Use the tedder.

4. Rake when clover is just wilted, not crisp.

5. Put in well-built coils and draw at the earliest possible moment.

6. Pack solid in mow. The most destructive agent is dew or rain. Therefore, do not draw in when damp with dew, or with the bottom of coils damp from contact with the ground. Properly saved, clover should have all the fine leaves, blossoms and stalks intact—not crisp and breaking off.

Q. Will not clover cut so early yield little hay and be hard to cure ?

A. By cutting early less weight is obtained, but it is of much better quality, and the increased aftermath is so much more that the whole for the season is greater.

Q. Do you believe in the old proverb, "Make hay while the sun shines"?

A. No. Keep your fine clover in the shade. Wilt, rather than dry it.

Q. Why is clover hard to grow?

A. Myron A. Gee, Fisherville: Lack of humus or vegetable matter in soil. Top dressing makes a catch pretty sure.

Q. Should clover be pastured the first year sown?

A. Never; it needs all its strength to stand winter.

Q. Which is the best clover for all soils?

A. Common red clover. If soil is deficient in humus, plow down the aftermath, instead of pasturing or cutting for seed. I know a man who grew Mammoth Red for seed. He grew one crop of seed (pasturing till June); plowed the sod for oats, and the next year followed with wheat, then seeded down again. He grew good crops of each, and the farm did well under the treatment.

LUCERNE OR ALFALFA.

By F. C. Elford, Holmesville.

There are probably very good reasons why lucerne should be attracting so much attention and gaining in popularity as it is at present. Not the least of these is the fact

* Single plant of lucerne, showing the large number of stems from one strong tap-root.

that, in spite of the exceedingly dry seasons which we have, it will grow and produce a splendid crop of valuable fodder or pasture. Lucerne is frequently spoken of as a comparatively new plant, while, as a matter of fact, it is a very old plant, having been cultivated by the Greeks and Romans long before the Christian Era. Later it was introduced into South America, gradually travelling northward through New Mexico, Southern, Western and Northern States, and lastly into Canada, where the more it is known the better it is liked.

* This illustration is taken from O.A.C. Bulletin No. 111 (Lucerne or Alfalfa), published by the Ontario Department of Agriculture, Toronto.

Why It Is Not More Favorably Known. I think the chief objections to lucerne have been raised by persons, who, not knowing it, have tried it once or twice and failed. Those who have been growing it for years are its strongest advocates. In our experience of fifteen or sixteen years, the best results have been obtained by following a hoed crop, using as a nurse crop about one bushel of barley or oats per acre. We sow at least twenty pounds of good seed per acre. We put the seeder in front of the drill, thereby getting a deeper covering for the seed. Too much care can not be taken in the preparation of the seed bed. Twenty pounds is little enough; some sow thirty.

The Critical Period. The first winter and spring is the critical period of its history, and in order to get it safely past this danger point, it is better not to pasture after the nurse crop is taken off, but to allow the young clover to grow and form a mulch so as to protect its roots from the frost. The next season, though it may not look very promising at first, it will produce two or three crops of hay or fodder, and the stand will become thicker with each successive cutting. Considerable of the lack of success in growing lucerne has been the failure to comply with one or two minor, yet all important rules, viz., lack of sufficient previous preparation of the soil, too shallow covering of the seed, and close pasturing the first fall.

Time to Cut for Hay. Probably the most important consideration with lucerne is the time of cutting. It must be cut early. If it is not, instead of a palatable, nutritious hay, we have an indigestible fodder.

Should not be Grown with other Clovers. The practice of mixing lucerne seed with red clover and timothy has not been followed with success. By the time the red clover and timothy are ready to cut, the lucerne has passed its cutting stage, and the hay is of poor quality. For this reason lucerne has rather a bad reputation. Prof. R. Harcourt of the Agricultural College, Guelph, issued in 1900 a bulletin (No. 111) on the composition and digestibility of lucerne. His very valuable experiments showed that, to obtain the greatest proportion of digestible matter, the hay should be cut when not more than one-third of it is in bloom. I think it is better to cut a few days before this time than as many days after it.

Cutting and Curing. In cutting, our practice has been to avoid, as far as possible, leaving the hay in the swath over night. Start the mower going when the dew is off in the morning, and rake early in the afternoon, when it is still tough, and put it into small coils before night. Much of the quality as well as quantity is lost by allowing it to remain in the swath too long. Cure it in the coil. Hay cut at this age and cured after this manner makes an exceedingly palatable and nutritious ration. All stock, from hens to horses, like it, and will fatten upon it. Chemists claim that for feeding purposes a ton of it is equal to a ton of bran. Those who have fed it extensively say that for working horses it is as good as timothy hay and oats. It makes an excellent pasture for all kinds of stock, especially hogs, but there is danger of pasturing it too closely and killing it.

A Great Fodder Crop. As a fodder crop lucerne excels. It can be cut early in May and thereafter every five or six weeks throughout the season. An acre of it will often produce as much green fodder as an acre of corn. As a soiling crop for milch cows it has no equal. Soiling is certainly more economical than a bare pasture, with cattle tormented with flies, scorching in a hot sun. Lucerne is pre-eminently a dry weather plant. It does not burn out when young, like the red clover, and no summer is so dry that it will not produce a crop. Its roots go deep and are able to get from the subsoil all the moisture required. Like other clovers, it has the power of taking nitrogen from the atmosphere.

A Dry Weather Crop. It is not an uncommon thing to see a field of lucerne growing green and rank, while the next field of red clover or timothy may be burned almost to the ground. Though some people claim that it will grow on any soil short of bare

rock, the nature of the plant is not adapted to wet soils, nor is it fitted for a short rotation. Since we have to combat dry, hot seasons, farmers would do well to have at least one or two fields seeded to lucerne. This would supplement the pastures and guarantee a certain amount of valuable hay for the winter feeding.

DISCUSSION.

Q. How much lucerne do you sow per acre ?

A. F. C. Elford, Holmesville : Twenty pounds or more of first-class seed.

Q. How many crops can be cut per year in Ontario ?

A. Three, and sometimes four, depending on the soil and the season.

Q. How many tons can you grow per acre ?

A. From ten to twenty of green fodder and from two to six tons of cured hay.

Q. In what kinds of soil will it grow ?

A. In any kind of soil that is well under-drained.

Q. How long will it last ?

A. Some say forever. I do not know.

Q. Is it a good dry-weather plant ?

A. It will stand more drought than any plant I know of. The roots going down 12 or 15 feet, penetrate to permanent moisture and pump the water from the subsoil.

Rev. W. W. Shepherd, Superintendent of Indian Farm, near London : Our method of seeding for alfalfa is as follows : When we have finished cultivating our corn for the last time we go up and down the rows and sow alfalfa by hand (or red clover if we wish to seed with this), following the seeding immediately with an A-shaped harrow, covering the seed lightly. The seed germinates at once, and when we take off our corn for the silo we have a splendid growth of plants, which are well protected in winter by the corn stubble, and make a rapid growth early next spring. I regard alfalfa thus sown as one of our most valuable farm crops.

Q. Have you any experience with lucerne ?

A. G. W. Clemons, St. George : I sowed two acres with 53 lbs. of seed, and with a nurse crop of oats, one-half bushel per acre. Did not pasture the first year, but let the aftergrowth act as a mulch. Last season I cut 11 tons of hay in three cuttings.

GREEN AND BARNYARD MANURES, AND THEIR APPLICATION.

By F. M. Lewis, Burford.

The question of manure is one that concerns every tiller of the soil. Every farmer realizes that he could raise abundant crops if he had plenty of manure to apply, but the farmer that gives any serious thought as to how to increase the quantity or improve the quality of his produce is the exception and not the rule.

We find that the practise of plowing down green crops for improving our soil conditions is as old as agriculture. Every farmer has realized the value of doing so to some extent. As to what constitutes the value has not been given much consideration.

Soil Humus. The most important question the farmer has to deal with to-day regarding the maintenance or restoring fertility of the soil is, "Soil Humus." At the annual meeting of the Experimental Union in 1900, Prof. I. P. Roberts, of Cornell University, stated that the soils of our continent contained sufficient plant food for the production of from 300 to 500 crops, yet to-day we find our farms already becoming less productive simply because this fertility is an unavailable or locked-up condition, and the successful farmer is the one that is finding the key for working the best combination. The time has been when most every farmer who prided himself on doing proper work piled his manure in the yard at least once, and often more. The more it heated the better work he thought he was doing, when in reality all the good he did was to kill the weed seeds, and it was a wonderfully expensive method. Every day that his manure heap steamed he was losing the very best fertility it contained, and that was only part of the

loss, for it has been ascertained that the rotting of the vegetable matter in the soil is the great secret of unlocking the plant food, and especially that which is the most difficult to unlock, "the mineral plant food," so he not only lost fertility by fermenting in the heap, but also lost the power to unlock what is in the soil.

Increases Moisture. This is not the only advantage of putting plenty of vegetable matter in our soils, as it has a wonderful effect upon the water-holding capacity of our soils. A piece of land, part of which had been cropped for years, until it was about exhausted of its humus content, was tested for moisture. Another part of the same soil which had only two crops taken from it was sampled for moisture. The atmospheric conditions of each was the same, yet that which was rich in humus contained 1½ quqarts of water per cubic foot more than the other. These same soils, when wet to the same extent and exposed to the sun for ten hours, the one rich in humus contained a quart more moisture per cubic foot. We see by this that the amount of humus in our soils plays a very important part as to its water-holding capacity. When we remember that all plant food in the soil must become soluble in water, and that such food is taken into the plant only through the moisture that is in the soil, we realize the importance of anything in our soils that will increase its water-holding content.

Plowing Under Green Crops. Any of our ordinary sandy or clay soils will be benefited by the plowing under of green crops. The amount of benefit derived will depend upon the crop, as some are of so much more value than others. Nitrogen is the most expensive element to buy in a commercial way, and as our clovers, peas, beans, vetches lupines, etc., have the power of taking free nitrogen from the soil, they are of more value than any other class of plants for green manuring. An acre of alfalfa upon which there was 90 lbs. of nitrogen applied in three years, contained in the crop that was taken off 912 lbs. As to whether it is going to pay best to plow a crop under or gather it for feed, returning the manure to the soil, will depend upon circumstances. If our soil is impoverished and much robbed of its humus, then it must have an abundance of vegetable matter before first-class results can be obtained from the application of fertilizers. This is not encouraging to the farmer who is cropping his farm, and expecting some day to make it profitable by applying commercial fertilizers.

Value of Manure. The value of our manures depends largely upon three things: The care which we take of it, the age of the animal consuming the food, and the kind of food we give it. The ideal condition for our manures is to keep it under a shed, tramped sufficiently to prevent heating, and kept moist enough so if it should warm up a little it will not fire-fang. Fire-fanged manure is not very valuable. The following table will give the reader some idea of the value of keeping manure in the yard in a compact form, rather than scattered. Bear in mind that manure loses only by fermentation and washing, and not by drying.

Manure in heap in the open yard. Total weight of manure.		Manure spread in open yard. Total weight of manure.	
Nov. 3, 2,000 lbs. Nitrogen	12.9	Nov. 3, 2,000 lbs. Nitrogen	12.9
April 30, 1,428 lbs. Nitrogen	12.8 "	April 20, 1,730 lbs. Nitrogen	9.2 "
April 23, 1,405 lbs. Nitrogen	9.3 "	Aug. 23, 1.226 lbs. Nitrogen	5.0 "
Nov. 15, 1,391 lbs. Nitrogen	9.2 "	Nov. 15, 1,150 lbs. Nitrogen	4.5 "

Many barnyards seem to be selected with the purpose of having them wash out all they can. The probability is that when manure remains in such yards over the summer that a great deal of the value is lost by washing out and entering the ground at some point where it does not do any good.

Young growing stock gives manure of less value than stock that has come to maturity. What food the latter consume more than is needed for support is given off in the dairy cow as milk, and in the beef animal, stored as fat, and in our working animals is used up as energy, replacing the tissue which are constantly wearing away. The young growing stock give off in solid and liquid excrement from 50 to 65 per cent. of the fertilizing value of food consumed. Dairy cows, 75 per cent., and fat cattle, or animals at rest, 90 per cent. You will conclude then that if you are going to buy stock

for feeding that you will buy mature animals, as their manure is of so much more value. There is something else to consider. The lighter growing animals are the cheaper; they will put on a pound of gain. Take, for example, hogs. This table gives the amount of meal necessary for an animal at various weights to produce one pound of gain.

From 54 to 82 lbs.... ..3.10 lbs. meal From 115 to 148 lbs.... ..4.38 lbs. meal
From 82 to 115 lbs.... ..3.75 lbs. meal From 146 to 170 lbs.... ..4.55 lbs. meal

Several experiments by private individuals, as well as experiment stations, bear out the correctness of this statement. This is not only true of hogs, but of other stock as well.

Fertilizing Value of Foods. The next thing to consider is the fertilizing value of food consumed, and we should keep this in mind in purchasing food for our live stock.

All of our farm produce contains two elements, or combinations of elements, known as proteins and carbohydrates. In foods rich in protein we get the elements the animals require for building the bony and muscular structure, and the material our dairy cow uses for milk production. The carbohydrates furnish the material to supply the animal with fat, heat and energy. Some of our foods are rich in one form and some in the other. Bear in mind when buying that foods rich in protein are the most expensive. We have not time here to consider carefully this question of feeding, but the proper proportion in which to feed for the proper nourishment of the animal body is about one of protein to six of carbohydrates. This will be somewhat varied according to what we wish to accomplish by our feeding. By a careful study of the following table we will be able by comparison, to find out the feeding, as well as the manurial value, of some of our more common crops. Nature has dealt kindly with us, for we find that those which are of most feeding value, or most costly to buy, yield us the most value as fertilizers.

NUTRITIVE RATIO.

—	Protein to	Carbohydrates.	Fertilizing value.
			Per ton.
Wheat	1	9.9	$6 99
Corn	1	12.	4 95
Rye	1	11.	5 42
Barley	1	9.3	4 72
Oats	1	5.8	6 22
Peas	1	2.8	9 04
Buckwheat	1	6.8	4 02
Soy and Sajo Bean	1	1.9	16 10
Cow peas	1	3.1	11 32
Wheat bran	1	3.8	10 33
Wheat mid	1	4.8	7 70
Buckwheat mid	1	2.1	14 03
Linseed meal	1	1.6	16 73
Cotton seed meal	1	1.2	19 87
Clover hay	1	6 0	7 47
Alsike	1	5.5	7 71
Alfalfa	1	4.1	7 34
Timothy	1	16.2	4 35
Cow peas	1	3.8	6 62
Soy bean	1	3.9	7 10
	Nutritive ratio.		
Wheat straw	1 : 65.	.....	2 02
Barley	1 : 61.	.....	5 46
Peas	1 : 8.	.....	5 84
Soy or Soja bean	1 : 18.	.....	4 74
Corn stover	1 : 17.4	.....	4 13
Corn ensilage	1 : 16 5	.....	1 13

You will see by this that the less carbohydrates to one of protein, the more it costs you in the market, and the higher value it is as a manure. Let us as farmers seek to produce more of this class of crops and reap the double advantage. When buying we

must take stock of what we already have, as to its feeding value, and then buy something to mix with it to get a balanced ration. Sometimes we might sell and buy something of more value to us.

At another point we have lost a great deal. How common it has been to find in our stables a row of holes in the floor behind our stock to let the liquid get away. We saved the solids and lost the liquids. Take notice of the following table and see where the money went:

Horses solid $1.36	Liquid $8.62	Sheep solid 1.59	Liquid 11.31
Cattle solid .86	Liquid 3.14	Hogs solid 1.79	Liquid 3.06

Cut straw, leaves, dried muck and sawdust in limited quantities should be used as an absorbent, and not let one bit of liquid get away. Cement floors are of great value to us as farmers.

Clover is such an important crop that anything regarding its use to best advantage is of value to us. Fertilizing value for plowing down of clover at different stages of development.

	Per Acre.
Plants, 5 to 7 inches high	$21.94
Plants, 12 to 14 inches high	34.64
Plants, blooming	37.06
Plants, matured	43.96

All information the writer has been able to gather points to the correctness of the table. A man cut a field of clover for hay. One side of it was pastured by sheep the balance of the season; a second crop of hay was taken from the other side. The following season he noticed his grain crop was decidedly better on the part that had the two crops of hay taken off it. The following season he cut a field for hay; from the first half of the field he took the second crop of hay off; the other side he let mature. He found that between the time of taking off the second crop of hay and the maturing of the other side that the root extent of clover had doubled on the growing crop, and that the increase of nitrogen was as eight to five. The most which the maturing crop of clover loses is the sap, which is only water, and it gains a great deal in root, which makes humus, and also gathers a large amount of nitrogen.

The greater part of our successful farmers are putting manure direct from the stables upon the land during the winter season, and report better results than where drawn out and spread later in the season. There is one class of men that object to this method, and they are the men on heavy clay soils that are not underdrained, and no man can get the best results out of a clay farm until it is underdrained.

The roots which feed on this manure are near the surface, the deeper roots feeding more on the mineral elements, and we want to make it as easy for our plants to feed as possible.

DISCUSSION.

Q. Would you put manure out on hilly land in the winter?

A. I have frequently met men on hilly farms who report having splendid results. It will depend largely upon the nature of the soil. Try it for your own satisfaction. You can afford to lose a little for the advantage gained in getting it out early

Q. Would you not as soon plow down rape as clover?

A. No; you can get everything in the clover the rape could possibly give, and the clover gathers nitrogen and seems to impart a tilth to the soil which few other crops give.

Q. Do you think plowing clover under of more value than to feed it?

A. It certainly does most good plowed down, for then you get all there is in it.

Q. Is coarse manure the best for all soils?

A. Short manures will probably do best on very light soils, and a very coarse manure is often best for underdrained clays, greatly improving the tilth.

Q. Why is barley straw of more value as manure than wheat?

A. Barley straw is exceedingly rich in potash.

Q. Do you think clover hay better for working horses than timothy?

A. Yes; the clover is rich in the material for repairing the muscular waste which the working horse necessarily incurs.

Q. I have rye, barley, oats, corn, and some timothy hay. How can I feed them to get the best results?

A. You cannot make a balanced ration out of this lot, but peas, bran, linseed meal, cottonseed meal or gluten meal would be of value to you to help balance up what you have. You might be able to sell something you have and purchase to advantage, not forgetting to consider feeding value, fertilizing value, and select something your particular class of stock will relish.

Q. Will it pay to feed my dairy cows concentrated feeds in winter?

A. If you have good cows it certainly will. If they won't pay to feed there is no profit to be got out of them.

Q. What crop per acre will give the largest amount of hog feed?

A. Mangels or turnips. Eight pounds of roots are equal to one pound of grain, and four pounds of grain will give one pound gain in live weight in hogs. Figuring upon this basis, an acre of roots, yielding 800 bushels, will give 1,500 pounds of live weight. An acre of barley yielding 42 bushels, 504 pounds live weight. The value of barley straw should be considered.

Q. What is that soy bean you speak of?

A. It is a Japanese bean, which is as yet only in its experimental stage, but promises well and is worth watching, and some care in cultivation.

Q. What are cow peas?

A. The cow peas are really a bean of great value in southern countries, but as yet are only experimental in the north.

Q. Considerable is heard now-a-days about small tubercles, or nodules, on the roots of clover and peas, and of their power in taking nitrogen from the atmosphere. Does this apply to corn?

A. John Barton, Weston: No; there are no tubercles on the roots of corn. The question as to the formation and use of tubercles is a much debated one. They are found, as far as we know, only upon the roots of leguminous plants, such as clover, peas, vetches, etc. Careful experiments conducted by our best scientific men have shown that these nodules or enlargements upon the roots of plants are caused by the action of bacilli on the roots of plants. The plant grows the nodule, and thus affords a lodging place for the bacilli, and in return the bacilli extract nitrogen from the free air in the soil and store it in the root of the plant. This process is scientifically known as symbiosis, which might be simply defined as a beneficial partnership for both, the plant providing the bacillus a home, and the bacillus in return furnishing fertilizing material for the plant. It is for this reason that clover and other leguminous plants are so valuable in a rotation of farm crops, besides simply drawing on the fertility of the soil they have the additional power of extracting fertilizing material from the atmosphere. In this way they are storers of plant food, rather than exhausters of it. This explains why we are able to cut from two or three tons of clover hay per acre from land, and the following year grow with success almost any farm crop.

Q. Which has the greater manurial value, green or well-rotted manure?

A. There is less loss in putting manure on land green than in rotting it before it is applied. Besides this, there is a special advantage that in putting the manure on in the winter time it is done at less expense. In rotting the manure under the most favorable conditions chemists tell us that it loses 50 per cent. However, when it is on the land in the green condition and the fermentation allowed to take place in the soil, as soon as any plant food is liberated it is in the place where it is most readily taken up. Besides this, the decay of manure in fermenting has a beneficial effect in warming up the

soil. Experiments carefully conducted at Guelph, as to applying manure fresh and rotted, proved that the ordinary way of leaving manure exposed to the weather was wasteful; when protected from rain it was still subject to loss, and when put on fresh the best results were obtained.

Q. Are peas a satisfactory crop for manure?

A. Yes; they would be to plow in green. If clover can be grown, however, there would be no need to plow in peas. The same work that peas would accomplish could be done much cheaper by clover.

Q. Myron A. Gee, Fisherville: Do you approve of drawing manure in winter?

A. Yes, draw and spread on soils to be top-dressed and plowed down for peas or hoed crops, but I would not put it on deep snow on rolling lands. Manure can be drawn out just as spring is breaking, on frosty mornings, with a good shod sleigh or large stone-boat.

Q. Is liquid or solid manure the more valuable?

A. Weight for weight, liquid manure.

Q. Can we continue to grow corn and other grain crops without the use of commercial fertilizers?

A. Major Sheppard, Queenston: I think so, for many years to come, at least, by making the most of the manure we have. By growing clover and other plants of that nature we can grow good crops without the aid of artificial manure. What the future may bring forth we cannot say.

Q. Is it well to plow in manure?

A. Chas. S. Moore, Stanbridge, Que.: Not as a rule, unless the manure contains so much straw that it cannot be worked in with a harrow.

Q. What do you think of manure sheds?

A. J. W. Clark, Onondaga: They are a splendid thing, as you can keep the manure from being exposed to the snow and rain, and retain all the liquid part, which is far the most valuable.

Q. What do you use to absorb the liquid part?

A. I find it pays to cut straw for bedding, as it is much more easily handled, and can be spread on fall-plowed land, and worked in with the cultivator without any difficulty In this way you have the manure mixed with the soil where the plants can make the best use of it, and it acts as a mulch in dry weather. I have never seen a failure of a catch of clover when the manure was applied in this way.

Q. Would you lose much by plowing down manure 6 or 7 inches?

A. I think you would to a considerable extent, especially if we happened to have much rain, as the liquid soaks down, and can only be reached by the deep-rooted plants, such as clover.

Q How would you handle manure?

A. T. G. Raynor, Rose Hall: I should handle it to prevent as much waste as possible, by saving with the solid all the liquid. To do this satisfactorily it must be either kept in sheds and prevented from heating by tramping, or applied fresh to the soil.

Q. What is the best time to draw out manure?

A. If one can, I would say, as fast as it is made. Otherwise, in the early spring, before the sleighing is done, if possible. Next in order would be on planting ground after seeding.

Q. Would you plow manure under?

A. No, not if I could work it satisfactorily in the surface soil. If not, I would plow in as lightly as possible.

Q How much loss is incurred by leaving manure in the yard all summer?

A. I would say, fully half or two-thirds of both bulk and plant food.

Q. Is the quality of the manure affected by the feed?

A. Most assuredly. The foods richest in protein or flesh-forming elements will make the richest manure. Care must be taken to save the liquid as well as the solid.

Q. Will manure waste much when spread in winter ?

A. No, except when applied on ice, and a freshet might follow. It suffers nothing from evaporation.

Q. Would you recommend putting manure on a steep hillside in winter ?

A. Duncan Anderson, Rugby : No; on steep hillsides and low, flat fields that are covered with water in the spring, I would not advise spreading the manure on snow. On moderately level fields winter spreading of manure gives good results.

Q. Do you approve of buying artificial fertilizers ?

A. A. Elliott, Galt : Not until we care for and properly apply our barnyard manures.

Q. How about bone dust ?

A. Bone dust or broken bone is not an artificial fertilizer. I refer to mineral or rock fertilizers.

Q. Do these fertilizers contain plant food necessary to plants ?

A. They do, but evidently it is not available.

Q. What is the most necessary element in the soil ?

A. Humus.

Q. Why.

A. 1. The presence of humus in the soil in sufficient quantities renders available inert plant food in the soil.

2. Humus increases the capacity of the soil to retain moisture.

3. It renders heavy soils more friable and makes light soils more compact.

4. Soil rich in humus, being dark in color, is warmer during the growing season.

Q. What is humus ?

A. Decaying vegetable matter in the soil.

Q. Do you advise the use of salt as a manure ?

A Myron A. Gee, Fisherville : No; it acts like a physic. It helps to elaborate plant food, but is only direct food to mangels. With an application of 200 to 300 pounds per acre it seems to pay.

Q. Would you use plaster ?

A. Yes. I believe plaster has its place. One place I believe it would pay to use 100 or 150 pounds per acre, is when we are seeding down with grass seeds. We don't always see the benefits in its use. It tells more in a dry season than in a wet one.

Q. Does the soil lose ammonia from the decay of manure in the soil ?

A. John Barton, Weston : No; ammonia exists in manure in its free form in very small quantities. The elements of ammonia are found in urine in a substance known as urea. It is found also in the nitrogenous waste of solid food and animal fertilizers, such as blood, bones, etc. Ammonia is liberated from urea in the soil by being acted upon by various acids, such as sulphuric, phosphoric, and nitric. The final products of these acids are much more stable than the original substance urea, and are not given off by evaporation, but may become dissolved and taken up by the roots of plants.

Q Is land plaster, or gypsum, of value to growing corn ?

A Yes. Plaster is gypsum, or calcium sulphate. It has very little direct manurial value, because the calcium, or lime, is not a fertilizing element in plants. However, it has an indirect advantage, in that some unstable forms of ammonia, such as ammonium carbonate, are broken down by it, and are turned into forms which will not evaporate from the soil, but are used up by being dissolved in the soil moisture. Gypsum would have a greater advantage on soils deficient in lime, such as light, sandy loams, but would probably not be of any great advantage on soils with limestone bottom. With corn it should be put between the rows and worked in with the cultivator.

CORN.

The following paragraphs have been taken from the last report of the Agricultural and Experimental Union, and the information should prove useful to those who grow corn for the silo, for seed or for table use :

Fodder Corn. The Mastodon Dent has been found to be one of the best silage corns for the early soils in Southern Ontario. The Wisconsin Earliest White Dent has given excellent satisfaction as a silage corn in Central Ontario, and the North Star Yellow Dent variety appears to be very well suited as a silage corn for many districts of Northern Ontario. Although there was a considerable amount of difference in the average yield per acre in the tests of the three varieties of corn, it will be seen that the three varieties were about equal in popularity.

Corn for Grain. In each of the past two years different varieties of corn have been distributed and tested throughout Ontario from the standpoint of grain production. Each experimenter was asked to weigh the total crop of each variety and then to husk, dry, thresh, and weigh separately the grain produced by each kind of corn. Two varieties of flint and one variety of early dent were distributed in each of the two years. The North Star Yellow Dent corn made a very high record in the average results of each year's co-operative tests, producing an average of 59.9 bushels of grain per acre in 1900, and 48.3 bushels per acre in 1901. The North Star Yellow Dent variety produced an average yield of corn which was 11.4 bushels per acre greater than that of the Compton's Early in 1900, and which was 4.7 bushels per acre more than Compton's Early in 1901. Combining the two year's experiments, we find that the varieties stand in the following order in their yield of grain per acre: 1. North Star Yellow Dent. 2. King Phillip. 3. Salzer's North Dakota. 4. Compton's Early.

Sweet Corn. All three varieties of sweet corn were quite popular among the experimenters. The Kendel's Early Giant proved to be slightly the earliest, the Country Gentleman gave the largest number of ears, and the Mammoth White Cory was the most popular of the three varieties. These are all good varieties for the production of green corn for table use.

Planting Corn in Rows and in Squares. An experiment has now been conducted over Ontario for three years in succession, in which corn has been planted in rows three inches apart, and, in comparison with this corn, has been planted in squares or hills three inches apart both ways. Exactly the same amount of corn was used for each method. Flat cultivation was used throughout, and the same amount of cultivation was given to each method of seeding. The corn which was planted in squares, or "hills," surpassed the corn which was planted in rows, or drills, in total yield per acre by 1.2 tons in 1899, 1.6 tons in 1900, and 1.1 tons in 1901. In yield of ears per acre, the squares surpassed the rows by ½ ton per acre in 1899, and ⅛ ton per acre in 1900, but the results were equal in this respect in the average tests for 1901. These results throughout are in favor of planting corn in the hills as compared with drills.

THE CULTIVATION OF CORN.

By Edward Curts, Nashville.

In the cultivation of corn we find it is better to prepare the ground in the fall. Select a field that has had a crop on it, gang plow it first and work it down fine, and leave it until fall. Then plow it again and leave until spring, when it should be cultivated and harrowed. In winter haul out manure and spread it, putting on the ground about ten or fifteen tons to the acre. It may now be plowed and made ready for planting. We find that the best time to plant is from the 24th of May till the end of the first week in June. The method we adopt for planting is plowing in shallow in every third row. This does not give the crows a chance to work on it, and leaves room for the use of the scuffler.

The kind of corn used in this locality with the best results is the Yellow Dent, which, if left a little later in the fall to ripen, makes splendid hog feed as well as fodder for the stock. Last year a small splot of this kind yielded about 100 bushels of ears, while the stalks were just as good for feed. This kind of corn comes to maturity comparatively early, so that the frost seldom affects it.

DISCUSSION.

Q. What is the best kind of silo to build ?

A. G. C. Caston, Craighurst : No doubt the cement silo would be the most durable. It is much more expensive, but if well built it should last for generations, and would be the cheapest in the end. The cheapest silo is the wooden one, known as the tub or round silo, that is as to first cost. Where lumber is not too dear this kind may be built very cheaply.

Q. What do you think of the octagon silo, built with scantling and lined with dressed lumber inside ?

A. It means a lot of work for nothing, and extra expense. It will not keep the silage any better, nor as well, as the well-made tub silo. No matter what kind of material I used, whether wood, concrete or stone, I would make the silo round. You don't want any corners in a silo. No matter what material is used, the points to be remembered are to have the silo round, deep (never less than 20 feet; 25 or 30 feet is better), smooth and perpendicular inside, and air tight. You could not have anything better than a big round hole in the ground, plastered with cement, if it was not for the trouble in getting the silage out of it.

Q. How would a stone silo do ? Would you advise building one of stone and lime ?

A. Well, my own is partially built of stone and lime. It is built round and plastered smooth on inside, and the staves are set up so as to come flush with the plastered wall inside.

Q. Have you seen any built entirely of stone ?

A. Yes. Joseph Watson of Clifford, Wellington County, has one, and reports it as giving entire satisfaction, and there are many others. No doubt, where stone is plentiful, and the silo is well built, and on a solid foundation, and the inside plastered smoothly, a round silo is all right.

Q. Would a round one be stronger than a square one ?

A. Certainly.

Q. What size should the wall be ?

A. I should say 24 or 30 inches for the first 8 feet, and then gradually taper to about 15 inches at the top, but keep inside of wall perpendicular.

Q. What is the best corn to grow for the silo ?

A. The variety that will always mature in your locality before the frost.

Q. At what stage of maturity should it be cut to make the best silage ?

A. At the glazing or dough stage; that is, just past the milk stage, when the milk in the grain has begun to stiffen to the constistency of thin dough.

Q. What is the cause of mouldy spots here and there through the silage ?

A. That is caused by letting the corn get too dry before putting it in the silo, also improper mixing. Too many dry leaves in one spot causes it to get fire-fanged in spots. Corn should be put right in as it is cut. If corn gets frosted and the leaves are dry, they must be wet. Use plenty of water. It is a good plan to pour several barrels of water on it after the silo is full. If the corn is at the right stage of maturity you won't hurt the corn by having it wet. If it gets a shower of rain and goes in wringing wet it will be all the better. However, if corn escapes frost and is put in at the right stage of maturity, and not allowed to become wilted, but put right in silo as it is cut, there will be enough moisture in it to make it keep all right, providing the walls are air tight.

Q. Do you tramp it ?

A. Yes; I regard that as important. It should be well mixed. Stalks, leaves, and cobs should be well mixed up, especially around the sides, and well tramped down. Never put a lazy man in the silo.

Q. What will silage cost per ton ?

A. About $1.50 per ton.

Q. Can corn be grown and put in the silo for $1.50 per ton ?

A. Yes, if you manage it right you can do it for that. There is a great deal in the way you manage the cultivation. I sow in drills 42 inches apart. The rows should

always run north and south. The corn and the weeds come up about the same time. A thorough harrowing with a light smoothing harrow or a weeder at this time, if the weather is dry and sunny, will work wonders, make the corn grow fast, and destroy most of the weeds. A regular use of the scuffler after will ensure a good crop, even in our dryest summers.

Q. Would you recommend an early-maturing corn to one that would give a larger yield, but was later and would not mature so well ?

A. Yes, certainly. The difference in quantity is more than made up by the better quality. That is my experience.

Q. Do you believe in early sowing of corn for grain or silage ?

A. Andrew Elliott, Galt: I would rather give my land ten days' cultivation than ten days' planting.

Q. Why ?

A. By cultivation you kill weeds and heat up the soil, promoting a rapid, clean growth, which will bring the crop rapidly forward, giving an early maturity, with abundance of grain.

Q. Do you plant in hills or rows ?

A. I prefer hills. By cultivation both ways the field is kept clean at the least possible cost.

Q. How far apart ?

A. Forty inches.

Q. At what stage do you cut your corn for the silo ?

A. T. H. Mason, Straffordville : Have it just about as ripe as if you were cutting for grain and wanted your stalks in the best possible condition.

Q. Do you let your corn wilt before putting in silo ?

A. No; when mature enough it would damage it to wilt before filling. I do not care to have very much cut ahead of the teams. Even a heavy dew makes disagreeable handling, besides picking up dirt on the leaves and knocking the edge off the knives.

Q. What is the thickness of cement in the bottom of silo ?

A. From three to four inches. Its principal use would be to exclude vermin, and, on some soils, water.

Q. Do you think you could get more corn in the silo if you put three or four men in to tramp it ?

A. You might get a little more in, but it would not pay. One good man to keep it mixed is all that is necessary. Its own weight will pack it enough.

Q. Does ensilage affect the flavor of the milk ?

A. Well-matured ensilage does not affect quality of either milk or butter.

Q. Can cows be fed on turnips and not taint the milk ?

A. Small quantities of turnips may be fed by a skilful feeder along with other foods, and not perceptibly taint the milk. The taint might develop later in cheese and butter. The practice should not be encouraged, especially when the land that will grow turnips will grow better food.

Mr. Beaumont, Bracebridge, made the following statement :

I have grown Compton's Early and White Cap Dent, both very satisfactorily. Think Compton's the best, as it matures earlier. The White Cap Dent gives a very heavy yield. I have no silo yet, but shall build one. Corn-growing has passed the experimental stage in this district, and when properly cultivated and manured gives a very large yield of valuable fodder.

Mr. Hollingworth, Beatrice, Muskoka, also said :

I have made corn-growing a success, and consider it a valuable aid to dairying. I have a silo.

Q. What quantity of corn should be used to the acre ?

A. T. H. Mason, Straffordville : From 6 to 8 quarts per acre ? Too thick seeding is a great mistake. You do not get the same feeding quality or cash value to the acre.

Q. What do you think of shredded corn ?

A. Mr. Hawkins, Brownsville : I have tried it this year, and wish I had not. My cows show plainly what they think of it. I have not yet found a man who thinks well of it.

Josiah Smith, Corinth : I have tried it this year, and find my cattle do well upon it. My corn was a little damp. I did not tramp it, but let it lie as loose as possible. It heated and formed a mouldy crust about six inches thick. Under that crust the feed was all right.

Q. Have you any knowledge of the benefits of a shredder for filling the silo ?

A. A. J. Reynolds, Scarboro' Junction : After one year's experience I find a shredder is very satisfactory. The ensilage is reduced very fine, and the corn is removed from the cob, which is also broken up. More ensilage can thus be packed in smaller space. It also keeps perfectly.

Q. Should a silo be protected from the frost ?

A. It is not necessary to have a silo frost-proof. If the silage is frozen it should be thawed before being fed, which is very inconvenient. The colder the ensilage is kept, without being frozen, the fresher it will be.

Q. How much ensilage should be fed to each cow daily ?

A. About 30 to 35 pounds, which should be mixed with cut hay, straw or pulped roots.

Q. Is not corn more easily grown than in former years ?

A. Major Sheppard, Queenston : Either from better varieties being introduced or from some climatic conditions, corn can now be grown successfully must farther north than it could 15 or 20 years ago. In fact, twenty years ago, there was no dent corn grown in Ontario, except in the Counties of Essex and Kent, and even then it was not considered safe to depend on the dent variety.

SOIL CULTIVATION.

By Myron A. Gee, Fisherville.

The four great sources of national wealth are the productions of the soil, forests, mines, and fisheries. The ore taken from the mines can never be replaced, the forests require centuries to grow another crop, the fisheries under modern methods are being depleted, but the soil, if intelligently tilled, a proper rotation of crops grown, and a good selection of seeds sown, will produce year after year, for an indefinite period, good paying crops.

The three main principles of soil cultivation are, first, drainage; second, manuring; third, tillage. Drainage is first to be considered, as no crop will yield satisfactorily if there is a surplus of surface water.

Drainage. Lands are drained by surface drainage and tile drains. Sandy lands generally have natural drainage, needing neither ditches nor tile. Land that is well drained can be worked earlier in spring and early sowing always increases the crop. It is also more easily worked than undrained land. Drainage also prevents the loss of plant food by its being absorbed into the soil, instead of running off.

Manuring. All stock should as far as possible be fed on the farm, and the manure taken good care of, if the fertility of the farm is to be maintained. Have the barn-yard small, so that it can be deeply bedded all over. Draw the manure directly from the stable to the field, or pile it in a compact heap, mixing all kinds together to prevent fire-fanging. Farm-yard manure both fertilizes the ground and supplies humus. The humus improves the mechanical texture of the land and prevents leaching. It holds moisture from the sun, and by making the land dark in color it absorbs more heat from the sun. This makes the land warmer, causes a quicker and more vigorous germination of grains sown, and is a considerable factor in growing a heavy crop. The vegetable matter of manure in decomposing acts mechanically on the mineral elements in the soil, and makes the phosphates and potash available for the growing plants. Humus, or veg-

etable matter (which is mostly nitrogenous), is the element lacking in nearly all impoverished fields, and can be returned to the land by plowing down clover and green catch crops, and growing lots of peas.

Tillage. The preparing of a seed bed is very important. It matters not how rich a field may be, if the roots of the plants are not able to range through it and take the fertility out, a partial crop will be the result. Land, especially clay, should not be touched when too wet. Soils need stirring to allow heat and air to get into them and to aid in preparing plant food. By having a fine mulch of dry soil on the surface of the land it prevents moisture being taken from it by sun and wind, arresting it just where the growing plants need it. Tramping land by stock when wet, and pasturing too heavily on the catches of clover, are two reasons why farms are not more productive than they are at present. Ontario must soon come to the day when intensive farming will be the practice, rather than the extensive farming which is so much followed to-day.

Q. How would you drain lands that are too heavy to tile ?

A. Myron A. Gee, Fisherville : Plow in narrow ridges of from 12 to 20 feet in width, and set it up well, having no hollow places in the ridge. Run cross-furrows through the lower levels, and scrape out the main ditches to three feet wide and one foot deep, with sloping sides. This ditch carries lots of water, and machinery runs across easily.

Q. How should a rotation be arranged ?

A. Have a light-feeding crop follow a heavy-feeding one, as wheat after peas, or oats on clover sod. Deep and shallow rooted crops should alternate.

Q. Do you plow pea stubble, or root or corn stubble ?

A. No ; we cultivate pea stubble for fall wheat, top-dressing knolls and seeding down. Root or corn stubble should be furrowed out in the fall and ditched well. Sow oats or barley on it in the spring.

Q. What about grass peas ?

A. Grass peas do well on clay soils, are bug proof, the straw is good, and the yield fair. Sow about 1¼ bushels of seed per acre, and no more. If sown too thick all grow to straw ?

Q. How do they compare with others for feed ?

A. Seem stronger and need to be diluted more with lighter grain.

Q. Do you grow mixed crops for feeding ?

A. We grow a mixture for horses and pigs, sowing oats 3 bushels, goose wheat 1 bushel per acre, and it is splendid. Also oats, grass peas, and goose wheat do well. Sow the mixture thicker than you would either grain alone.

Q. How much alfalfa do you sow per acre.

A. Twenty to twenty-five pounds. It must be sown liberally to get a thick stand, which prevents too much coarseness in the hay.

Q. Have you any experience in growing speltz ?

A. No, but I have heard a good deal, and fair to splendid yields have been obtained ; as high as 45 bushels per acre. It appears to be a crop suitable to poor soils. When cut green, straw is like hay.

Q. Have you any experience in cow peas ?

A. It is not a crop suitable for growing in Ontario. It is a southern crop, not suitable to our short seasons.

Q. Have you noticed much sorghum grown for feed ?

A. Not very much. Some claim it to be a good feed in the fall.

Q. Have you had experience with mammoth clover ?

A. No, but it is similar to the common red. It is of ranker growth, but does not give so good an aftermath. It is good for pasture, or to sow in the spring for plowing down in the fall.

Q. How would plowing in of clover compare with manure ?

A. I have no figures to give the money value, but I know it is a first-class practice to plow in the second growth of clover, as it improves the soil, both chemically and physically. It adds humus and plant food as nitrogen.

Q. Do you consider alfalfa better than red clover for fertilizing the land ?

A. The red clover is the kind to use in a rotation. Lucerne is only recommended for a permanent crop.

Q. Do you know anything about a weeder ?

A. Yes, I have one and like it well on potatoes, corn and the grain crops.

Q. Have you any idea of the comparative value of alfalfa and red clover as hay ?

A. Yes, we arrive at that from their nutritive ratio and manurial value. In feeding value alfalfa excels, as its nutritive ratio is 1:3.8. and red clover is 1:5.8., according to Prof. Henry's work on "Feeds and Feeding." In manurial value they are about the same.

Q. What size should the tile be for a main drain ?

A. A. W. Peart, Burlington : That depends upon the quantity of water to be removed, and one must use his judgment. I have found a three-inch tile to answer very well for my purpose. Sometimes a four-inch or an eight-inch tile may be necessary. In a general way, the less the fall the larger the tile should be.

Q. What fall should a drain have ?

A. I consider an inch to the rod a fine fall, but have drained on an inch to 50 feet, and if necessary would drain on even less, using large tile.

Q. How far apart should branch drains be ?

A. That depends on the nature of the soil and the subsoil. In porous land we lay them from 30 to 35 feet apart, and in clays 20 to 25 feet.

Q. Should tile be laid below the frost ?

A. Not necessarily. In my experience, I have never known frost to break tiles, as long as the water was running freely through them. Of course, if the water were dammed up and frozen solid, then the tile would burst. We lay our drains about three feet deep.

Q. Should anything be laid over the joints before the earth is filled in ?

A. Yes, inverted sods or straw several inches deep.

Q. How does water get into tile ?

A. Chiefly through the joints, but partly through the tile itself.

Q. Would it pay to drain land that has a reasonably good natural drainage ?

A. I think not for ordinary farming purposes, but where lands are low and wet there is no better way to invest a little money. Such lands when drained are the best on the farm.

Q. Do you believe in plowing much.

A. In a general way I think that heavy clays should be plowed oftener than lighter soils, as they get very stubborn and compact. Where fields are weedy the plow is the radical and effective way to make a clean seed bed. I believe, too, in fall plowing for spring crops.

Q. How can we keep moisture in the soil ?

A. By keeping plenty of vegetable matter in the land, and by frequent surface cultivation.

Q. How can you tell the depth of surface soil ?

A. It is usually darker in color than the subsoil.

Q. How deep do you plow ?

A. That depends. If the soil be deep, and plowed in the fall, I plow about 6½ to 7 inches deep for ordinary spring grains. If plowed in the spring, an inch or two lighter. If the surface soil is shallow I plow lighter.

Q. What is the best time to plow a field to kill the Canada thistle ?

A. August.

Q. How would you kill couch grass ?

A. Either with a hoe crop or by summer fallow.

Q. How much salt do you use to the acre ?

A. One hundred and fifty to two hundred lbs., sown broadcast after field is plowed, and before it is cultivated for crop.

Q. Would you use salt on a clay field ?

A. No, nor on a wet one. I use it on the lighter soils, chiefly for roots.

Q. Are soft wood ashes as valuable as hard wood ?

A. Four-fifths as valuable. I would not use ashes on clay soils. It would be a waste of the potash. They are used more on sandy and gravelly loams.

Q. Are special or artificial fertilizers of any use ?

A. They are valuable in their place, especially in growing fruits.

Q. What principle should we aim at in the rotation of crops ?

A. To have, as far as practicable, a nitrogen-gathering crop precede a nitrogen-consuming one, e.g., clover, peas or vetches preceding wheat, barley or corn.

Q. Why do you lay so much stress on clover ?

A. Because it is the life of the farm, the secret of the bank account, and the "Eureka" of the progressive farmer.

Q. Can soils be inoculated with nitrogenous germs to make them more fertile ?

A. Yes, according to recent experiments in Germany and the United States. As yet, though, this seems impracticable in agriculture.

Q. Would you prefer plowing root and corn land in the fall ?

A. T. G. Raynor, Rose Hall : No. As good and often better results are obtained from the spring preparation of the corn or root stubble with the disc harrow or spring-

Q. What is the best time to sow rape for pigs ?

tooth cultivator to prevent a hard crust forming in the spring.

tooth cultivator. It is wise on clay ground to work the surface in the fall with a spring-

the ground is rich, a less quantity will do, and if poor larger quantities of see

A. As early as possible, although it may be sown at different times with good results. It may be sown broadcast, with oats or barley, in the spring, or it may be sown in drills, as in the case of turnips.

Q. Is frozen rape injurious to the stock, and of what nourishment is it to the soil ?

A. Frozen rape is injurious to feed while it is frozen, but not when the frost is drawn out. It would be a good crop to plow down, but it is better to feed off and return the manure from stock as the result of feeding it.

Q. Have you found a remedy for the pea bug, or a substitute for the grain ?

A. Yes ; one way would be to stop growing peas for two years, except the weavilly-proof variety (viz., grass peas).

Q. Have you any experience in sowing mixed grains ?

A. Yes, and I like the practice very much. Peas, oats and goose wheat make a good mixture, sowing about two bushels of the mixture per acre.

Q. How about the ripening of the mixture for threshing ?

A. Varieties may be selected which ripen quite evenly, and I would cut it on the green side.

Q. How deep would you work your seed bed in spring ?

A. That would depend to some extent on the variety of grain to be sown. Speaking in a general way, from two inches to four inches.

Q. What is the best time to sow clover seed ?

A. If on fall sown grain I would say very early in the spring, while the ground is still honeycombed with frost. If sown with spring nurse crops, as early in spring as possible. If sown in the fall, as a number are now doing,, I would sow it early in September.

Q. How much grain do you sow to get a good stand of clover ?

A. I aim to sow the nurse crop sparingly, about one-third less grain than I would ordinarily sow, and cut it at harvest time on the green side.

Q. How much clover seed do you sow per acre ?

A. That will depend upon the richness of the land ; from 5 to 12 pounds per acre. If the ground is rich a less quantity will do, and if poor larger quantities of seed will be required.

Q. Do you sow grass seed before or behind the drill ?

A. Duncan Anderson, Rugby : Always in front of the drill.

Q. Is it advisable to summer fallow ?

A. A. J. Reynolds, Scarboro' Junction: Not at all. We can grow a crop of corn, and by proper cultivation can secure the very best preparation for fall wheat. Do not plow the land after the corn is removed. The corn stubble and roots serve a double purpose of holding the snow on the land and of preventing heaving by frost.

Q. What amount of oats should be sown per acre?

A. The amount of seed will depend on the quality and condition of the soil. By sowing comparatively thin we can secure a better quality of grain. I would sow about 1¾ bushels to the acre. By drilling the grain less seed should be sown.

Q. Is the Canada thistle as common as it was a few years ago?

A. No. By thorough cultivation and more hoe crops we have greatly checked the growth of this thistle.

Q. Is corn not hard on the soil?

A. Andrew Elliott, Galt: Corn is a gross feeder, and any plant that produces as large an amount of food must consume a good deal of plant food in growing, but I have found that better crops can be grown after corn than after roots. I also find that corn is the best crop to follow with clover that I know of. Rarely will you miss a catch of clover following corn. Therefore it cannot be very hard on the soil.

Q. Is it not best to sow corn quite thick when one has not a silo?

A. Get a silo and sow thin. Cultivate well, feed properly, and you will wonder how you got along in the old way.

Q. What is the best crop to precede corn?

A. Clover.

Q. How do you prepare it?

A. During winter draw out and spread the raw manure as made. About the middle of May plow five inches deep. Thoroughly pulverize and continue cultivation until May 24th or June 1st, then plant.

Q. Is not this too shallow plowing?

A. I do not think so. The natural fertilization is on the surface. I aim to have the first four or five inches of my soil rich, rather than have that fertility spread through eight or ten, so that the fertility may be quickly and abundantly available for the young plants.

Q. Have you followed surface manuring and shallow cultivation for any length of time?

A. Yes, and the longer I practise it the better I like it.

Q. How many loads of manure to the acre?

A. Ten or twelve. Manure light and often.

Q. Will not shallow cultivation leave the soil so solid that roots will not penetrate a sufficient depth?

A. In most soils the roots of clover and other deep-rooted plants keep the subsoil sufficiently open. A grubber or subsoiler may be run over to loosen the soil, but not bring it to the surface.

Q. You speak of the middle of the day being the best time for cultivating. Does not the soil dry out too much in stirring it up at that time?

A. John Barton, Weston: No. When the soil is stirred the heated air at 85 or 90 degrees F. enters it, and the soil being cooler three or four inches beneath the surface than it is at the top, the warm air is condensed, and is forced to give up its moisture, which enters the soil, and is thus assimilated by the roots of plants.

HORTICULTURE.

FRUIT NOTES.

By A. W. Peart, B.A., Burlington.

Apples are the most important fruit grown in the Province, different varieties being adapted to a wide range of soils and climate.

In planting an orchard in a given district I think it is always well to ascertain, as far as possible, what varieties do the best in that district, and then plant accordingly. In the Burlington locality, for instance, the Duchess for summer, the Ribston and Blenheim for fall, and the Baldwin, Spy, and Greening for winter, appear to take the lead. The same principle applies to other sections in the adaptability of varieties. I think that in the past the mistake has been very generally made of planting trees too closely together. Instead of 25 and 30 feet apart, 35 to 40 feet would be better, according to the nature of the soil. To do their best, trees, like men, should have plenty of room.

Soil for Apple Trees. Apples will do well in a broad range of soils, a heavy clay being probably the least suitable. The land, however, must not be wet, otherwise the trees will soon perish. While planting, people are often in too big a hurry ; the trees are not set deeply enough, and the result is that in a few years they either lean badly in the direction of the prevailing wind, or are eventually blown out altogether.

Thinning Fruit. A good deal is said and written about thinning out fruit by hand when small, so as to improve the size and quality of the remainder. In the case of apples, pears, and plums, at least, I think that this is impracticable, save to the amateur, who is not making his living by growing fruit, and that the practical, profitable, and economical way to thin fruit is by thinning out the branches ; in other words, by pruning. If the apple-growers of Ontario wish to increase the profits of their orchards, it seems to me that two things must be done : First, to care for their trees, so as to improve the quality of the fruit, and, second, to so handle the fruit as to realize the greatest possible margin of profit. Under the first of these are involved pruning, spraying, cultivation, and feeding ; under the second, careful picking, packing, and grading, whether in boxes or barrels, for the British, foreign or home markets.

Pears. Pears have not so wide a range in climate in this Province as apples. A soil very rich in humus, or a light, sandy soil and subsoil are not well adapted for pears. There is apt to be too much growth, and consequent blight, in the former, and a deficiency of potash in the latter. For profit probably Clapp's Favorite, Bartlett, Duchess d'Anjou, and Kieffer stand about first. The four latter are essentially export pears. Better and more reliable cold storage service will, however, have to be provided before growers will venture to stake much on exporting their Bartletts to Great Britain. If placed on the market there in good condition, they realize handsome prices. As with apples, they should be carefully graded and packed for shipping.

Plums. Plums are widely grown in the Province. As the demand for them is chiefly limited to our Canadian markets, it would appear that the acreage is about wide enough for profitable production. Of the domestic varieties, the Lombard, Glass Seedling (Quackenbos), Reine Claude, Imperial Gage, Bradshaw, Niagara, Saunders, and German Prune do well. The Lombard and Reine Claude trees begin to bear heavy crops very early, and consequently do not reach the size of the Quackenbos, Bradshaw, and Niagara. The Japan varieties, Abundance and Burbank, appear to have a distinct place in a commercial orchard. Most plum trees should be picked twice, the first time removing the ripest and best-colored specimens. This gives the others a better chance to mature.

Grapes. Grape growing seems to be about co-terminal in latitude with pears. In districts where the vines have to be removed from the trellis and laid down for the winter to protect the buds from cold, it is a question whether the extra expense involved would not wipe out the margin of profit. In sections at all favorable, grapes, one year

with another, acre for acre, probably net the grower as much money as any other variety of fruit. They are a reliable crop. For the best results they should be pruned severely every March. Different systems are used. I use the spur system; that is, cutting the new buds back to one or two buds from the base, and leaving about sixty buds in all on a vine over four years old. Summer pruning, or cutting back the new fruiting shoots to three or four leaves from the outer bunch, makes larger fruit and tends to lessen mildew. The Worden is perhaps the hardiest grape grown. The severe and prolonged frost of February, 1899, injured it very little. This variety, with the Concord for black, and the Delaware, Massassoit, and Lindsay for red, and the Niagara and Moore's Diamond for white, do the best here. Grapes as well as pears are heavy feeders on potash, and therefore, if they are grown on light soils, require liberal applications of this food, either in the form of wood ashes or muriate of potash. I have made several attempts to place at a profit the better class of grapes on the British market, but so far without any marked success. They seem to reach there with the berries shelled from the bunch, so that in the immediate future we will have to rely upon our own markets alone.

Currants. Currants do not like a light sandy soil, nor yet a heavy clay. A rich porous one, sandy or gravelly, or a light clay loam, seems to be their choice. Until last year their margin of profit was narrow, so much so, that many plantations were pulled up. The reaction has set in, however, and we may look for better prices during the next few years. Of the red varieties, the Wilder (a new sort), Cherry, Red Victoria, and North Star are good; in white, the Grape and Imperial; and in black, Collins' Prolific, Saunders and Naples take the lead. Both the North Star and Collins' Prolific are later varieties. Black currants are desirable, inasmuch as they are practically immune from all insects and diseases, while the white and red varieties are easy victims to the currant worm, unless it is promptly destroyed with Paris green. This fruit is a voracious feeder, but it quickly responds to careful cultivation and liberal manuring.

Raspberries. Raspberries do well on a rich, sandy, gravelly or light clay loam. Like strawberries and tomatoes, they should have a southerly slope or exposure, to accelerate ripening; and, like other fruits, they abhor wet soils. They should be pruned twice, the annual pruning in the spring and the other in summer. When the new canes reach three or four feet long they should be topped back so as to make them push out laterals and become more stocky. The Marlboro and Miller, early varieties, and the Cuthbert and London, later, are excellent commercial reds. For purples, the Columbian and Shaffer take the lead. In blacks, Smith's Giant, Kansas and Older rank first, while for a yellow the Golden Queen is pre-eminent. The tips of the Cuthbert are sometimes frozen in the winter, and for that reason it should not have its annual pruning until the spring. With a due regard to the nature of the soil, I feed my raspberries on nitrate of soda each spring (150 lbs. per acre). Some six or seven years is, however, the normal life of a profitable plantation.

Blackberries. Blackberries require a rich, damp, but not wet, soil. A sandy loam, based on a quicksand bottom, appears to be ideal feeding grounds for them. If the conditions be favorable, they are very heavy croppers. With them, as with other small fruits, frequent cultivation until maturity, by checking capillary evaporation, helps to retain moisture. Among the best varieties are Agawam, Erie, Kittatinny, Snyder and Western Triumph. If earlier sorts be desired, Early King and Early Harvest will fill the bill, although these and Kittatinny are somewhat tender in many sections of the Province. As with raspberries, they should have both the annual and summer pruning. Snyder and Western Triumph in particular should be pruned severely in the spring, as they overload with fruit.

Currants, raspberries and blackberries should be plowed towards the rows in the fall and cultivated from them in the spring and early summer. In a general way, I do not think it is well to cultivate the tree fruits and vineyards much later than the last of July, then sow some sort of seeds, clover, vetches, peas, or rye, as may seem best. These will use and store up the soluble foods in the soil, thus preventing their leaching, and at the same time furnishing a cover for the winter.

STRAWBERRY CULTURE.

By F. A. Sheppard, Queenston.

The growing of strawberries is a question that should interest every man who has a farm or a garden. A few years ago the average farmer had the idea that strawberry growing was something of a specialty, and quite beyond the reach of the ordinary everyday farmer or stock raiser. This erroneous impression, I am pleased to say, is fast passing away, and a good many farmers are now growing their own berries. But still there are many who do not, and I claim that at the present time there is no excuse for a man who holds even a small bit of land in failing to provide a sufficient supply of fresh berries for his own table, and enough for preserving for the winter months.

The strawberry has many good points to recommend it. It is the first fruit to ripen in the spring, after a long winter without fresh fruit. It will produce more fruit per acre or for space planted than any other fruit we have. It comes to maturity and into full bearing in a shorter space of time than any other fruit, yielding a full crop about thirteen months from the time of setting out the bed.

It succeeds on almost all soils and under almost all conditions, and will grow and ripen over a wider ranger of territory, and under a greater variation of temperature than most fruits. On account of its creeping habit of growth, it is easily protected during the winter months in very cold climates by a covering of straw or other mulch.

I will briefly outline our way of planting and cultivating a strawberry bed, and while this is intended for field culture, still the same system is equally good for small patches or garden planting.

Previous Cultivation. In choosing a site for a strawberry bed I like a piece of land that has had some special cultivation during the past summer, and prefer a piece that has been in potatoes or roots, and has been well cultivated. The surface soil will then be in a fine condition and fairly free of weed seeds—an important point in the after cultivation of the patch. Now, I would not plow this land deep under any consideration, because by so doing you would turn down your clean, fine surface soil and turn up rough, lumpy soil from the bottom, which might be full of weed seeds. If the soil is sandy and is situated so that no water will lie on it, it will not be necessary to touch it at all in the fall, but if it is low land or a clay soil I would prefer to rib it up lightly in the fall with a shovel plow. To obtain the best results it is important to get to work on this land in the spring, just as soon as the ground is dry enough to work. This is for the purpose of establishing a soil mulch and preventing evaporation and consequent loss of moisture. Work the soil up fine to a depth of four or five inches, and keep the surface well stirred every few days with a harrow, until planting time. I usually plant about the tenth of May. Many growers plant earlier, but I think I can get my land in a better condition, and keep it clean a good deal easier with a harrow the first month than I can with hoe and cultivator later in the season.

Method of Planting. We plant in rows four feet apart, and set the plants two feet apart in the row ; then when the runners start out we let them fill up between the plants and spread out sidewise until the rows are about fifteen inches wide.

We usually plant with a spade. After we have got the land in proper condition for planting we take a land roller and roll the surface down smooth. Then we have a marker made for the purpose, with the runners two feet apart, every other runner being on hinges, and we mark the ground both ways, first crosswise, with the runners all down, making the marks two feet apart, then go the other way, this time turning up the hinged runners and making the marks four feet apart, then put in a plant at every cross. We press the spade into the ground with the foot (about six inches deep), then by moving the handle back and forth you open a slot in the rolled surface. Then by giving the plant a whipping motion into the slot you will spread the roots out in a fan shape. Now put your feet down, one on each side of the plant, and you will press the earth

firmly against the roots of the plant, being careful always to have the crown of the plant level with the surface of the ground.

Before planting I always trim off any surplus leaves from the plants and nip out the fruit buds, as I do not wish them to bear any fruit the first year.

Cultivation After Planting. As soon as we are done planting I run the cultivator through to break up the crust formed by the roller and the tramping while setting out plants, and keep the cultivator running through them at least once a week all summer, and go through with the hoe as often as is necessary for keeping down all weeds.

Pistillate and Bisexual Plants. In planting a strawberry bed, there is one important point to remember, that strawberry plants are of two kinds—pistillate and bisexual. The bisexual plant has a perfect flower, and will produce fruit of its own accord, but the pistillate plant has an imperfect flower, and unless it becomes fertilized by the pollen from some of the strong staminate varieties, will not produce fruit. A great many failures have been experienced on account of people not being aware of this deficiency in some kinds of plants. Ten years ago all of our best varieties were of the pistillate sort, and we had to use them, but since then a lot of new varieties have been introduced, the majority of which are bisexual varieties, so that at the present time we have no need to plant pistillate varieties.

As to the varieties that will depend somewhat on your own local conditions and markets. The kind most popular in this section (Niagara) at present are Beder Wood, Clyde, Glen Mary, Williams, and Brandy Wine.

Mulching in the Fall. As soon as the ground is frozen hard enough in the fall to bear up a wagon we cover the bed lightly with straw or other mulch, to protect the plants from heaving during the freezing and thawing of the spring months. When all danger of heaving is over and the plants begin to start, we go through and rake the straw off of the rows of plants and tramp it down firmly between the rows. This serves the double purpose of helping to retain the moisture and of keeping the sand from splashing upon the berries during heavy showers of rain.

DISCUSSION.

Q. What variety of strawberry would you recommend for this section (Powassan, Parry Sound) ?

A. F. A. Sheppard, Queenston : I think Clyde and Williams would be very good.

Q. What is the cause of strawberries not bearing, when they blossom and appear thrifty, but bear no fruit ?

A. The chances are you had a pistillate variety, which has an imperfect flower, and would require to be planted alongside of some of the staminate varieties, that have perfect flowers, so that the pollen of the perfect ones could mix with the imperfect and fertilize them ?

Q. Are you troubled with mildew on strawberries in your section ?

A. No, our seasons are usually too dry for that.

Q. What do you do for worms on currant bushes ?

A. Spray with Paris green when the worms appe

Q. Do you trim your currant bushes, and how much ?

A. Yes, cut back in spring about one half of last year's wood, and thin out the old wood.

Q. How can I get my tomatoes to ripen (Trout Creek)?

A. The tomato must have age before it will ripen. Our plan is to sow seed last of February or early in March in green house or hot bed, and transplant into cold frames about first week in April, six inches apart each way ; remove to field or garden carefully, without knocking off any of the earth, after all danger of frost is over. You should have ripe tomatoes in about 6 to 8 weeks from time of going to field.

PRUNING.

By A. McNeill, Walkerville.

Pruning, like every other farm operation, has its basis in a theory, and I hold that no man ought to cut off a limb or a twig unless he can give a reason for doing so. The theory of pruning is based on the general plan of plant life, and more particularly on the development of fruit spurs and fruit buds, as well as the ordinary wood growth. A careful study of fruit buds during a single season would do much to clear up the mystery that is supposed to surround the art of pruning. Apples, pears, plums, and cherries are borne on short, stubby branches, developed on wood two years old, and continue fruitful for a longer or shorter time.

The apple spur grows zig-zag on account of the new bed developing, not at the apex, but at the side of the spur. The plum, pear and cherry have fruit buds about the apex of the fruit spur. The apple spur is fruitful only for three or four years, and then drops off or bears only inferior fruit. The cherry and plum, as well as the pear, remain fruitful for a great many years; hence it is that the old wood, including the larger branches, are in these trees covered with fruit spurs. This difference in the life of the fruit spurs on the pear, plum and cherry, compared with the apple, makes a marked difference in the methods of fruning these trees. Since the old wood soon becomes unfruitful in the apple trees, it is necessary to provide new wood continually; but in the case of the pear, a tree which has once attained its full size and occupies all the space that can be allowed it, it may grow fruit for years with little or no addition of new wood. The peach tree does not develop fruit spurs, but has fruit buds on the one-year-old wood. Consequently, in all methods of treating the peach tree we must remember that we cannot expect fruit, except from last year's wood.

The raspberry and blackberry bear fruit only on wood of the current year's growth, which, having borne fruit, die with the stock upon which it has grown, and new wood springs from the root. Currant and gooseberry bushes, like apple trees, have fruit spurs on old wood which remain fruitful for three or four years, but, unlike the apple, the new wood of the currant and gooseberry bushes springs from the root, hence making a difference in the method of pruning. As the old wood becomes unfruitful, it is removed, and its place is taken by new wood springing from the roots.

We cannot have our developed fruit buds and fruit unless there is a good growth of wood, hence we endeavor in our methods of pruning to get a healthy wood growth first, which includes the development of stems and buds that will open up into healthy leaves. It may be put down as a maxim that nature provides many times as many buds as there is a chance to develop, and it is the work of the pruner to check this struggle for existence among the buds, and select such as will best give him the advantage of sun, light, air, and sap, so that leaves and fruit of the desired quality may be produced.

In the case of fruit buds, two and two do not always make four, for practical purposes. Indeed, the opposite rule more frequently applies, so that the fewer the buds the better the results obtained within certain limits, of course. One bud well nourished with sap, and plenty of light and air, will elaborate more material than four buds, having insufficient sap, light, and air; hence the pruner's art consists in selecting the best fruit buds and giving them the best chance in the struggle for existence.

The comparison that is often made between a tree and an animal does not hold good in the case of pruning. Cutting a limb off of an animal bears no sort of analogy to cutting the limb off of a tree, for in cutting away the old limbs and taking away some of the buds of a tree there is more nourishment for those left, and we may confidently expect a much better growth on the part of those remaining. How much we should cut away depends upon the balance between the root system, light, air, and plant food at our disposal. The wounds made by pruning, if properly protected from decay by paint or other material, are not at all harmful to the tree.

Reason would suggest that we occupy all the space about the trunk of the tree with leaves and fruit, endeavoring to utilize all our resources of sunlight and air. The

fruit-grower trains the tree so as to give it a proper form, and spread the leaves in all directions. Just how thick or how thin the limbs and twigs should be left is a matter that can only be determined by personal observation, as there is no royal road to the art of pruning. It is a matter of trial. A few suggestions, however, may not be out of place. Endeavor to have no vacant space within the circumference of the limbs. On the other hand, do not overcrowd so that some leaves will be seriously shaded. If the tree has been neglected for a number of years, it would be poor policy, indeed, to cut all the limbs away at once, that might be judiciously spared in the course of time. The limbs and trunk developed under conditions of dense shade, should not be deprived of this shade too suddenly, as there would be great danger of sun scald; speaking generally, the tendency is to leave too much wood, even where the pruning is done fairly well from the start.

What can be done to develop fruit buds? It is a matter of common observation that on a tree making excessive wood growth fruit spurs, or buds, are not developed in a corresponding degree. It has been observed also that anything that checks the wood growth will develop fruit spurs. This is the theory of root pruning, girdling and growing in sod. Diminish the vigor of the wood growth and nature makes an effort to perpetuate herself through the fruit. It is doubtful, however, whether any of these methods are to be recommended upon commercial grounds. Every species of a tree has its period of maturity. It is possible by some such methods as have been indicated to throw it into fruit before this period of maturity is reached, but only at the expense of the vitality of the tree. There is another method that has shown good results. If the terminal bud of a fast-growing shoot be cut off, the effect is to develop all the remaining buds to a greater or less degree. The upper buds will shoot forward with a wood growth. Those lower down will often develop fruit spurs. This work should be done about the middle of the growing season. Cutting away in the spring one-half or two-thirds of the previous year's growth is good practice where there is an excessive wood growth. It increases the tendency to develop fruit spurs, and brings the bearing wood nearer the stem of the tree. We do not expect a young apple tree or pear tree growing naturally to bear fruit for a number of years. During these years it is making a large wood growth, and pushing far out from the stem the wood upon which fruit spurs will be formed when the tree reaches maturity. By judicious cutting back of new growth each year while the tree is young there will be new wood formed, ready for fruit spurs when the time for bearing has arrived. This treatment will prevent long branches, bare of fruit spurs, so common in young and vigorous orchards.

Heavy pruning tends to promote wood growth, showing clearly that pruning is not detrimental to the health of the tree, but as wood is only desired inasmuch as we can make it produce fruit, we may sometimes be disappointed in not getting fruit the first year after pruning a neglected orchard, because the growth has gone to wood rather than to fruit spurs, but a balance will be produced soon, so that in the second or following year a crop will be produced which will amply reward the labors of the pruner.

It is sometimes said that we must prune in winter for wood and in summer for fruit. This is only partially true. Winter pruning should be the rule, as more work can be done in a given time. It is not so busy a season, and I have yet to learn of any serious damage resulting from pruning in the late winter. It is true, however, that summer pruning, or, rather, the stopping of fast-growing shoots during the month of June, has a marked tendency to develop fruit buds lower down the branch; but economic considerations must always prevent much of this work being done in the apple orchard, as the cost of doing the work will more than offset the benefit of it.

In the case of dwarf pears the question of the best time to prune is settled by the greater convenience of the months of March and April. In case water sprouts develop it would be well to rub these off at the beginning of the growing season; but the appearance of water sprouts is usually an indication that too much cutting has been done. It is just as well to leave one or two of these water sprouts to shade the naked limbs or trunk.

Provision should be made for removing old wood in an apple tree. In the normal condition of things, trees should make a growth at the tip of the limbs of at least one foot per year, which growth will soon bring the trees together, a condition of things which renders effective orchard work impossible. Before a limb is to be removed provision should be made for this space by leaving some vigorous water sprouts or new growth. By cutting this sprout back to within six inches of the main limb or trunk the following year new growths will appear from the upper buds, which should be again cut back. This process continued for a few years will give a short stout branch that will speedily take the place of one to be removed. There need not be any fear of cutting a large branch, provided the cutting is done close to the main branch or trunk, and directly in the line of the flow of sap from the root to the growing point, and provided also that the exposed surface is covered with paint or other substance that will protect it from decay.

DISCUSSION.

Q. Do you prefer the high head or the low head ?

A. I prefer the low head, starting at two and one-half or three feet, but would not advise it unless everything is in keeping. The advantages of the low head are: most of the work of pruning and picking is done on the ground, or with short ladders: the wind has less effect: spraying can be done better. The disadvantages are that you must have special extension tools for cultivation. But the slightly increased cost of cultivating the soil is more than offset by the advantages.

Q. What is the best material with which to cover wounds ?

A. Nothing is better than linseed-oil paint. Anything that will protect the wood from decay will do. Do not paint until the wood is dry.

Q. What tools do you recommend for pruning ?

A. A sharp, fine-tooth, stiff-backed saw, a long-handled saw, and long-handled clippers, with two cutting edges, if possible, and the ordinary hand-pruning shears.

Q. A few years ago my orchard had a great many large limbs taken from the trees ; these have not all grown over, and decay is setting in. How will I deal with them ?

A. If the wood is still solid, paint it and preserve it as it is. If it is so rotten that it can be easily taken out, take it out for a few inches, and fill with a mortar of sand and cement, two to one. New wood will grow over this as readily as over the old wood.

Q. How would you treat a wound made by "barking" a tree ?

A. During the growing season the orchardist should never be without a mixture of clay and old cow dung, half and half. Apply this mixture at once (in five minutes after the injury), after replacing the bark if it is not too much broken. Wind a piece of coarse cloth about it to keep all in place. Cover the wound at once with something to keep it moist. Clay from the nearest ditch bottom will do. In fact, if the piece of bark can be snugly replaced and held in position with several thicknesses of cloth bands, it will soon heal again. The essential thing is to cover the wound at once with something that will keep it moist.

Q. Major Sheppard, Queenston (at the meeting held in Queenston) : What system of grape trimming is preferred ?

A. The Kniffen system. (This was agreed to by the majority present).

Q. In planting out a new vineyard, would you use two or three wires ?

A. Seven spoke in favor of two wires, and three in favor of using three wires.

Q. How many believe in summer trimming ?

A. With one exception, the answers were in the affirmative.

Q. Can you give a recipe for grafting-wax ?

A. F. A. Sheppard, Queenston : Resin, 4 parts; bees' wax, 2 parts; tallow, 1 part; by weight. Melt together in a vessel over the fire. Turn into a pail of water, then pull until smooth, and lay away in small pieces until you need it. It will keep indefinitely.

Q. We are troubled with sun scald here. Have you a remedy ?

A. In this case the old saying, "prevention is better than cure," applies. There are several ways of protecting the trees. The damage is usually done in March, on warm days, when the sun shines bright. The sap starts up on the south and southwest side of the trees, then at night when the temperature falls quite low, the cells are frozen and burst and the bark dies. Anything that will protect the tree from the direct rays of the sun and prevent the rise of sap at that time will be beneficial. At home we often use a bunch of cornstalks and tie it around the trunk of the tree. One of the best things I know of is to make a V-shaped trough of six-inch lumber and tie it to the trunk of the tree on the south and west sides. This trough may be taken away in the spring, after all danger is over. If laid away carefully they should last several years.

Q. Where trees have been killed in the trunk, but the roots are still alive and good, thrifty suckers are coming up, how would it do to bud them ?

A. It would do all right, but they would still be liable to sunscald. I would prefer to let the suckers grow for a couple of years and then top-graft them in the limbs. I think good, strong seedlings produced right here in Muskoka will be less liable to sunscald than any trees brought in from outside points, and if properly grafted with marketable fruit would make very satisfactory trees.

Q. What time of year would it be best to prune apple trees in Muskoka ?

A. I would say in summer, say the month of June. I notice in driving through this country that your apple trees bear very young, and from what I am told, very heavily. I think this is one cause of your trees dying after they have borne a crop or two. They are weakened by the heavy crop when so young, and are rendered much more liable to winter killing. The fruit should be thinned. You would have just as many bushels in the fall if half the fruit was picked off in the early part of the season, and what was left would be much larger. It would also be better for the tree, as it is not the production of the quantity of flesh of the apple, that exhausts the tree, but the seeds.

Q. When is the best time to prune fruit trees ?

A. G. C. Caston, Craighurst : In June.

Q. Why ?

A. Because pruning should always be done in the growing season. When you cut a limb at that time nature at once begins the healing process. The sap goes up through the pores of the wood, goes to the buds and leaves, but returns by the cambium (inside layer of bark). It is then ready to build up wood tissue, and it is at the cambium that the healing process begins. Before the growing season is over there is a ridge of new tissue formed all around, covering the cambium and protecting it. In the case of trees pruned in the fall and winter, the delicate cambium layer is exposed to the frost and becomes dry and shrivelled, so that the wound if at all large will not heal satisfactorily. It is then very apt to decay. I have tried all seasons, and my experience points to June as the best month for pruning. If you cannot get it done in June, do it as near that month as possible. Never prune in the winter, nor in cold weather, when the wood is frozen.

Q. What is the best form of tree, low-headed trees or high standards ?

A. Well, I prefer a pretty high head, for the reason that you can cultivate closer to the tree with horses. For that reason I prefer to keep the heads pretty well up. They will always come down low enough when they come to bear heavy crops of fruit. The advantages in favor of the low head are that the trunk is shaded, which is an advantage where sunscald is prevalent; they are more easily reached in spraying and gathering of the fruit. There is some advantage in either form, but I prefer the high standard.

Q. What is the object to be aimed at in pruning ?

A. First, the form and symmetry of the tree, then a free circulation of air and sunshine through the top. This should be accomplished by thinning out the small branches, mostly around the outer part of the top, not by cutting out the centre, until the tree looks like an inverted umbrella, as is too often the case. The latter kind of spruning results in scalding the upper surface of the limbs and a big growth of suckers. Another object should be to get an even distribution of the bearing wood (fruit spurs) all over the tree. It would be hard to estimate in dollars the amount of damage that is done by bad pruning

in this Province, but it is immense. Every man who owns an orchard should know how to prune, and should prune his own orchard, or see that it is properly done.

Q. Would you paint the wound or cover with wax ?

A. Covering with wax is the best, but it should be renewed every year. Painting does very well to keep the wood sound until healed over. If limbs that have to be removed are cut out while they are small they will soon heal over in a vigorous tree. If it can be avoided, large limbs should never be cut off.

Q. Should the limbs be cut close ?

A. Yes. The practice of leaving a stub on is a very bad one. It is ruinous to the tree. The cut should always be made at what is called the collar, and in a healthy tree the wound will heal quickly. A tree should have a little yearly pruning to keep it in proper shape, and then it will not be necessary at any time to remove large limbs. As a matter of fact there are a good many varieties of an open, spreading habit of growth that need very little pruning at all.

APPLE GROWING IN ONTARIO.

By G. C. Caston, Craighurst.

There are two articles of produce for which Canada stands pre-eminent—cheese and apples. We have the soil and climatic conditions for the production of a high quality of both of these commodities. The other conditions are skill, care, and industry. With regard to our cheese, all the conditions have been applied by means of large grants to the dairy associations. The establishment of dairy schools, the appointment of travelling inspectors, the instituting of scientific experiments and research, has made the dairy industry flourish and added much to the wealth of the country. When we come to compare the export value of apples and cheese, the apples make rather a poor showing, but we must remember that the bulk of the cheese made in this country is exported, while in the case of apples, it is the very opposite. Th greater bulk of apples is consumed at home. Take the statistics of the Bureau of Industries for Ontario, and note the number of acres in orchard, the number of trees of bearing age, and the average number of bushels produced, and you get a better idea of the total value of the apple crop than you would from the export figures. But while cheese has about reached its limit as far as export value is concerned, there is great room for expansion in the apple trade, both in the home and foreign markets.

While the soil and climatic conditions are favorable for the production of fruit of the best quality, yet the apple orchards of the Province have received, on the whole, very little care and very poor treatment. There is great need for educational work along this line. This is apparent to anyone who travels through this Province and keeps his eyes open, for the question then arises, how can this work be done to ensure the best results and the most lasting benefits ? That will make for a better system of treatment.

Lectures at Institute meetings during the winter on fruit culture do not seem to have the desired effect. While much interest is manifested at the time, few seem to put in practice what they hear. Perhaps this may be partly explained by the fact that there are many other subjects on the programme, and just when the discussion has become interesting it has to be switched off and another subject introduced that is entirely different.

Wrong Methods of Orchard Treatment. In my opinion, better educational work can be done by means of Orchard Meetings, where no other subjects are introduced, and the teaching is by means of object lessons, as well as talks, on the details of the business. The basis of success in producing any article of commerce must always be—high quality of the product. Quality is everything—quality first, last, and all the time. We must get this high condition only by careful and proper treatment of our orchards. "Well, what is wrong with the orchards?" you ask. I answer that there are a good many

things wrong with them. Of course there are exceptions—there are some localities and some individual cases where good treatment has prevailed—but, speaking broadly, the wrongs may be summed up as follows : Trees planted too close ; too many on an acre—this is a universal fault all over the Province. Then, very few are properly pruned. Thousands and tens of thousands of trees are being wrecked and ruined by a barbarous system of pruning. I think very few people are aware of the enormous amount of damage that is being done in this way. Then there are, in many cases, lack of cultivation, lack of spraying to deal with insects and fungous diseases, and lack of fertility. This last is a crying need in many cases. Thousands of trees are starving, and by their puny growth and pale foliage mutely appeal for food. What would our live stock be like if they were treated like many of our orchards are in the matter of feeding ? Then, another wrong is, too many varieties. This is a great and common mistake.

It would be impossible to deal fully with all these matters in this paper, so I will have to summarize briefly : First, as to the planting too closely. We should make 32 to 35 feet the minimum distance apart in planting, and we will always get better results from 50 trees to an acre than from 75 to 100. Trees planted too close will not do well when they get to bearing age. The branches interlace and shut out the sunlight that should get in about them, and if you could see the roots, they are interlaced far worse than the branches. Then, it is impossible to spray such an orchard properly. Again, there is the pruning ; this is one of the worst evils of all. Some people seem possessed of a mania for cutting and slashing trees, and here is where there is the greatest need for educational work. Some trees require very little pruning at all, while others need a good deal ; but it should consist in thinning out the small limbs to give the tree symmetry and admit of a free circulation of air and sunlight, and, at the same time, an even distribution of the bearing wood or fruit spurs. But the itinerant pruner cuts out most of the branches from the centre of the tree, until it resembles an inverted umbrella, and then they strip the fruit spurs off those that are left, leaving nothing but a little tuft at the extremity. The first effect of this system is that the sun blisters and scalds the upper side of the exposed branches, when nature intended they should be shaded by the foliage, during the hottest part of the day. The second effect is a mass of suckers, or water-sprouts—nature endeavoring to heal the branch—and the tree is practically ruined.

Spraying the Orchard. This operation is often carelessly performed, and there is a great lack of knowledge of the subject among farmers and fruit growers. There is no way in which this can be better taught than by object lessons in the orchard.

Cultivation. We see many orchards growing grain and hay, just as if there were no trees growing there. People who practice this method need never expect much fruit. Hoe crops are all right, providing the fertility is kept up. The cultivation required for this is just what the trees require. Permanent sod is an injury and a sure way of stunting the trees, unless an annual heavy mulching is applied. But the climatic conditions of this climate, subject as we are to droughts in summer, indicate clearly the importance of cultivation as the best method.

Fertility. Where trees are growing on good, strong soil, and receive good cultivation, they will produce good crops of fruit for several years, perhaps without the application of very much in the way of fertilizer ; but on light and loamy soils they very soon show lack of vigor and become stunted. There are many orchards to-day that are starving. When we consider that orchards are seldom planted on a virgin soil, but in nearly all cases on a soil that has been cropped to grain, and from which a large part of the potash and phosphoric acid has been exhausted, and that the tree requires material to build up wood tissue and an annual crop of foliage, and, later, of fruit, we see the necessity of providing food for the needs of the tree. Nitrogen is required for the wood growth, potash for fruit, and phosphoric acid for seed. The most economical way to supply these elements is by plowing in clover for nitrogen, and by supplying the other material by the application of hard wood ashes. Where the trees are large, sowing occasionally with rape and pasturing it off with sheep will help wonderfully in enriching the soil. Large trees will not be injured by sheep. When clover is grown for

fertilizing purposes, never cut it for hay, but plow it all in when about half in blossom, for you need humus in the orchard, and lots of it. Old chip yards and the cleanings from wood sheds made a good material for this purpose, and old rotten pea straw, or anything that will furnish a humus will be of benefit. Where ashes cannot be got, potash in some other form should be applied, and the phosphoric acid by means of ground bone, but these two elements are supplied most cheaply in the form of ashes. Good unleached, hard wood ashes are cheap for this purpose at from 15 cents to 20 cents per bushel. Forty bushels to an acre, once in two years, for bearing trees, with a crop of clover plowed in once in two years, would be far better treatment than the best of them are getting now, and will give on ordinary soils very good results. Stable manure is all right, providing you can get it, but as a rule the orchards get very little.

Varieties. Practically speaking, what were our best varieties twenty-five years ago are the best to-day. Five or six varieties are enough for a commercial orchard, and I would place the Spy first, then King, Baldwin, Greening, Ben Davis or Gano, and Ontario. I would top-work every one of them on hardy stocks, such as Tallman Sweet, Pewaukee Haas, etc. Wherever there is a locality adapted to apple-growing, this crop can be made one of the most profitable in the whole range of agricultural products. There is in this Province abundant evidence to show that, while on the whole orchards have been very badly treated, yet where they have been planted with proper varieties, and received good care and treatment, they have given larger returns, acre for acre, for the time and money spent on them, than any other product of the soil.

DISCUSSION.

Q. How far apart should apple trees be planted?

A. A. W. Peart, Burlington: From 35 to 40 feet, according to the richness of the soil and the vigor of the tree.

Q. Do top-grafted trees begin bearing sooner than others?

A. Yes.

Q If a summer apple be top-grafted with a winter variety, will the latter ripen any sooner?

A. Yes, so far as my observation and experience go.

Q. Is it possible to vaccinate fruit trees so as to render them immune to fungous attacks?

A. I believe that future experiments will answer in the affirmative.

Q. What is the future for apples?

R. Good. With proper care, packing, and marketing, apples should be good property in the future.

Q. When should an apple be picked?

A. When it has gotten its full size, its color, and is still hard.

Q. Where should apples be kept?

A. In a dry, cold room, as near freezing point as possible.

Q. What about the Ben Davis apple?

A. In places where it does well, I think it is a profitable variety to plant. I think, on account of its keeping qualities, it will be a popular hotel variety in the Old Country.

Q. What is the future for pears?

A. I think that, when cold storage becomes reliable, export varieties may be grown with considerable profit.

Q. What are the leading export varieties?

A. At present, the Bartlett, Duchess d'Anjou, and Keiffer.

Q. What about plums?

A. I think that the acreage is wide enough in the Province at present. Prices are low, and we have only the home market for the demand.

Q. What about the export of tomatoes?

A. It is yet uncertain. I exported a few cases of Honor Bright to Glasgow last fall.

The first lot sold at six shillings per box (24 quarts), but the last lot arrived useless, and brought nothing.

Q. What are the chief needs of the Ontario farmer to-day?

A. (1) Better education; (2) better knowledge of the soil.

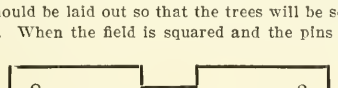
PLANTING AND CARE OF AN ORCHARD.

By T. G. Raynor, Rose Hall.

Apple culture is becoming a foremost industry in this country. There are large markets opening up. Besides the English market, the Northwest market is a very promising one.

Location. I believe a slope to the north or northwest to be preferable in most places, even where the orchard is near a large body of water. In such a location vegetation is more backward in early spring, which lessens the danger from late spring frosts.

Preparation for Planting. The land prepared for the orchard should be well worked and manured, then it should be laid out so that the trees will be set straight in rows running in every direction. When the field is squared and the pins set where the trees are



to be planted, it is an easy matter to proceed. A board about three feet long, as per cut, may be used to get the tree to stand just where the pin was placed.

Drainage. Drainage should be arranged for on heavy soils. This may be done by loosening the soil quite deeply where the rows of trees are set. Afterwards a complete system should be provided.

Proper Stock for Planting. Every person setting out an orchard should decide on the proper varieties suited to his locality, and, if for a commercial orchard, they should be merchantable varieties. Good-keeping, red varieties seem to be in keenest demand nearly everywhere. A fine-looking apple, regardless of the quality, is always in demand. Too many varieties in an orchard is not desirable, but four or five of the right sort is all that is necessary for cross-fertilization. Buyers will, for reasons which are obvious, pay much better prices for a few varieties than for a great many. The stock should be purchased from a reliable nurseryman, and not too much dependence should be placed in agents, who are in the business for what they can get out of it. I would advise buying stock from a nursery nearest the planter, providing his stock is all right.

Time to Plant. Spring seems to be the most favorable time for planting. When the trees are delivered great care should be taken to prevent the exposure of the roots to sun or wind, and heeling in moist earth is advisable. In preparing the holes, they should be dug deeply enough that when the tree is set it will be just a little lower in the ground than where it stood in the nursery row. To plant well two persons are necessary, one man to set the trees and the other to dig the holes and fill in. The trees must be trimmed, topped back, and all broken and decayed roots should be cut off. In planting, the roots should be spread out well and the trees jarred gently as the fine earth is thrown in. This will bring the soil in close contact with all the fine roots. Then this should be tramped firmly and the hole filled to the surface and left loose on top. Care should be taken in shaping the head of the tree. To get a good strong head the three or four branches forming it should start irregularly from the stem, and no two limbs should grow opposite each other. In view of the necessity of spraying and having the fruit well colored, it is not advisable to plant closer than thirty feet each way, and for large growing varieties forty feet would be better.

Cultivation of the Orchard. It pays to cultivate the soil well anywhere, but particularly so in the orchard. As soon as the trees are planted a mulch of manure is good to hold the moisture and also furnish nourishment for the trees. The proper crop to grow

in an orchard while the trees are making growth is some kind of a hoe crop. If grain is sown in the orchard it is good policy to leave a space on each side of the rows of trees for cultivation. After the first plowing in the fall, or in the spring of the year, the after work should be done on the surface. Cultivation in an orchard should be to keep down weeds and to conserve moisture. In July, however, all cultivation should cease in order to allow the wood to ripen properly before winter. Unless this practice is followed in colder districts there will be more or less injury of freezing back.

After the orchard has come to bearing it is advisable to use cover crops for plowing down or for pasturing by hogs. The best cover crops are clover, buckwheat, peas or vetches. The old adage, "Prune when the knife is sharp," is a good one. It simply means that a little pruning every year will prevent superfluous branches and keep the trees open and symmetrical in form. Proper direction may be given the limbs by watching the tendency of the buds towards lateral or vertical growth, and trimming accordingly. Cross limbs which are chafing others should be removed, and all dead and decayed limbs taken off. Always cut limbs as closely as possible to the trunk, in no case leaving a stub. June is the best month in which to prune, but March or April seem to be more convenient for most farmers.

Manuring. In order to have a fruitful orchard it must be well fed. Farmyard manure is good orchard fertilizer, as is also wood ashes, but they should never be applied together. The occasional plowing down of green crops is also advisable.

Spraying. This is an important operation. Every fruit-grower should have his reports and bulletins handy for consultation, so that he may make no mistakes in this important matter. Spraying has been condemned by some growers because they did not know when to spray nor what they were spraying for.

Picking, Packing and Marketing. In this matter the farmers and dealers have much to learn. We should take a leaf from the book of the California shippers in this matter, and grade all our fruit and use the small packages. Keep all fruit of poor quality at home or sell to evaporators. The Fruit Marks Act will no doubt do much toward regulating the quality of fruit shipped in packages. What is needed in the fruit business is hearty co-operation on the part of all concerned to produce the best, sell the best, and pack it in the best possible way.

DISCUSSION.

Q. What varieties of apples would you plant?

A. F. M. Lewis, Burford: Just enough fall fruit to supply your own table, and preferably the red for winter fruit. They sell a little better and are just as productive. I could not recommend any particular variety, as your section is different to mine. Plant something that does well in your own neighborhood.

Q. Will Bordeaux Mixture kill all sorts of insects?

A. No, only those that eat the foliage. The ones that suck up the sap, such as the aphides, have to be killed by kerosene emulsion.

Q. How far apart would you set Northern Spy trees?

A. I would not set Spys, but Talman Sweets, and graft the Spys upon them. You then have trees that bear much younger and that are also stronger. Set not less than 30 feet apart, but 35 feet is better.

Q. Would you cut a tree back when planting?

A. Yes, but don't cut a piece off every limb. Rather take part of the limbs completely off, being careful to leave the limbs most desirable for top formation.

Q. What would you do with an orchard set twenty years ago, and not of desirable varieties.

A. If you do not understand top-grafting, get some intelligent man who does, to top-graft your trees, using some one desirable variety.

Q. How can you best keep the orchard from dying out?

A. By intelligent cultivation, beginning early in the season, and continued until late in July. Then grow and apply an abundance of vegetable matter to be incorporated into the soil. Abundance of humus in our soil is the foundation of all successful farming and orcharding to-day.

Q. Do you think it will pay a man with a small farm or orchard to spray ?

A. Yes, it will pay any man to do it intelligently. In addition, the pump is a splendid thing for whitewashing our stables. In sprayng use lots of force. It saves material and does a better job.

PROPER MANAGEMENT OF ORCHARDS.

By J. E. Orr, Fruitland.

One of the prolific causes of failure of crops, in orchards of all kinds, is the neglect of tillage, and in some cases the want of intelligent tillage. It should be unnecessary in the year of grace, 1902, after all that has been said and written on the subject, to insist that tillage is an essential. But what about intelligent tillage ? To what extent is it carried on in our orchards ? By intelligent tillage we mean work done at the proper season, with the object of assisting the tree to perform its different functions, with at least some knowledge of what those functions are, when they are performed, and how the surroundings of the tree may be controlled to assist them.

The Formation of Fruit Buds. During the early part of the season our trees are making their woody growth, increasing in size, and therefore in productive capacity, forming new buds to replace those which are removed by fruiting, and which will, by and by, if properly nourished, bear fruit themselves. Every bud is capable under favorable conditions of developing into a fruit bud. If it has not these favorable conditions it may remain dormant or produce only new twigs.

During the latter part of the season, say after the first or second week of July, trees which are going to fruit the following year are transforming buds (which were primarily leaf buds) into fruit buds. This process continues as long as the foliage remains on the trees. Consequently a long, fine autumn is favorable for a good set of fruit buds. But a careful orchardist does not trust altogether to nature to supply the favorable conditions for the formation of fruit buds. He wants a crop every year, and he is aware that, unassisted by his skill, nature cannot be depended upon for this. In some very favorable fall the poorly-managed tree will set an enormous crop of fruit buds, using up a great part of the available buds. We know that where a tree is overloaded it will not make sufficient wood growth to supply material for new fruit buds, and that these conditions are not favorable for the production of fruit buds for the next season ; consequently we have off years. The work of the skilful orchardist is to so maintain the balance between the wood growth and fruit production that he may have fruit buds each year. If we are to have an annual crop it is evident that the tree should be handled in about the same manner each year. Manuring and pruning should be done annually, also spraying, whether the trees are bearing or not, for unless we protect the foliage and have it healthy and vigorous until late in the season we cannot depend upon a good set of fruit buds.

Cultivation. Cultivation is essential. It should start in the spring, in time to conserve the soil moisture, and should be followed up at least once a week, and oftener if necessary, until the first or second week in July. This is the period during which the new wood is formed, and the young fruit is growing, and the stirring of the soil assists this process. After that, cultivation should cease. We do not wish to excite any further wood growth, but rather to lessen the flow of root sap and get a better quality, that the conditions may be favorable for the setting of fruit buds.

Use of Cover Crops. After ceasing cultivation, it is a good plan to sow a cover crop. Legumes are preferable, but if it is too dry for them, as it usually is at that season, rape or some other plant will do. This cover crop is a cheap way of manuring the

orchard by plowing down each spring a large quantity of humus. Some of the other benefits of cover crops are that they maintain the balance of moisture in the soil, prevent erosion, retain the snow for the protection of the roots, and trap the leaves that fall from the trees. This last may appear a small thing, but it is the way in which nature has built up the fertility of our richest lands. It breaks up and utilizes insoluble plant foods, putting them in an available form, and also seizes upon any soluble plant foods which might leach out of the soil with the fall and spring rains. The best source of information on the subject is to study it direct from nature. Conditions vary widely with localities. Experiment, observe, and think. One pair of trained eyes are worth a dozen pair of untrained ones.

DISCUSSION.

Q. Are wood ashes useful in the orchard?

A. We use them in large quantities. Give an annual dressing of two to three pecks in the spring to full-grown trees, and you will be able to pick those trees out any time, or account for their rich, green, vigorous foliage. A healthy foliage means lots of well-prepared plant food, and therefore a good set of fruit buds. Farmers do not realize the value of hardwood ashes, or they would not take them off to the ash-gatherer for a cake of soap or a plug of tobacco. I once asked an old ash-gatherer how he could persuade farmers to part with their ashes. He said: "I can't, all of them, but I just drive along, and if I see a place with a good barn and everything well kept up, I do not bother going in, but if the fences are tumbled down, the barn door hanging by one hinge, etc., I am sure to get ashes there." It is too bad that thousands of bushels of ashes which are needed at home are annually exported to build up the worn-out farms of the United States.

Q. Are coal ashes of any use?

A. They contain only a trace of fertility. We apply what we have to a piece of heavy clay, to lighten it up and improve its mechanical texture.

Q. What is the best way to get rid of oyster-shell bark louse?

A. G. C. Caston, Craighurst: Wash the tree with an alkaline solution. Lye made from hardwood ashes is best.

Q. How strong would you make it?

A. Take lye that will float a potato, then add water until it sinks; that is for trees of bearing age. For young trees, dilute it a little more, and, after scraping off the rough bark, put it on with a mop. As the trees grow older the lice move out on the small branches and are often found in clusters out on the small twigs. In that case use a spray pump to get the lye on.

Q. When should it be applied?

A. If you watch closely, about the first week of warm weather, about the end of May or early in June usually, you will find the young lice moving out from the shell and spreading upward on the branches. That is the time to apply the lye and give them a good dose of it. Excellent results are reported from spraying with fresh lime whitewash, applied in March. It is claimed that the fresh lime loosens the scales, and the eggs of the lice perish. For this purpose two coats are applied. A second one as soon as the first has dried. When the spring and summer rains wash off the lime the trees are said to be almost, if not entirely, free and clean from all lice.

Q. What do you do to get rid of the little green lice on the leaves?

A. These are the aphids, or plant lice. One species is black. The black ones are found mostly on cherry trees. Whale oil soap (one pound to a gallon of water), or kerosene emulsion, will kill them. They are a sucking insect, and have to be killed by something that will kill them by contact with their bodies. The best time is just when the buds have swelled and are opening into leaf. If left until the leaves are full out the lice get on the under sides of the leaves, and then it is hard to reach them with the spray. One of my neighbors sprayed last year with Gillet's lye just at the right time, and it

killed the aphis. He used a can of the usual size to about seven gallons of water. This would have a good effect on the trees, as an alkaline solution always gives a healthy tone to the tree and gives the bark a smooth, healthy appearance.

Q. The codling moth is one of the most troublesome pests. What is the best treatment to keep it in check ?

A. In the first place, spraying with Paris green just after the blossoms fall, but, instead of the usual formula of 4 oz. to 40 gallons, use 8 or 10 oz. Paris green. This can be applied along with the Bordeaux mixture, without injury to the foliage, providing plenty of lime is used. After the mixture is made up, apply the Ferro-Cyanide of Potassium test, and when the mixture shows enough lime, add a little more. An excess of lime is a benefit, rather than otherwise. Then later on in the season bandage the trees with canvas or burlap. Cut it into strips about 10 inches wide and long enough to go twice around the trees, and tie with a string to keep it in place. Those should be put on before the wormy apples begin to drop. The moths find these bandages a very suitable and convenient hiding place, and form their cocoons, from which they pass into the winged stage. These bandages should be examined two or three times during the season, while the apples are growing and maturing, and the moths destroyed. Then another help is to keep a number of hogs in the orchard to pick up the wormy apples. If every one followed these methods the moth would be pretty well exterminated. The second brood is the most destructive.

Q. What crop should be grown in an orchard ?

A. "Cultivation is the best crop." Keep the orchard cultivated.

Q. Do not some orchards do well in sod ?

A. Yes. I knew a man who lived for eighteen years with only one lung, and did pretty good work, too. But he would have done better if he had had the other. I have seen orchards do fairly well without cultivation, where they were heavily mulched every year. If you could get a mulch over the surface just like you find in the forest, with a thick carpet of leaves all over it, that would be an ideal condition. An orchard standing in the tough sod will not thrive.

LIVE STOCK.

HORSE BREEDING FOR PROFIT.

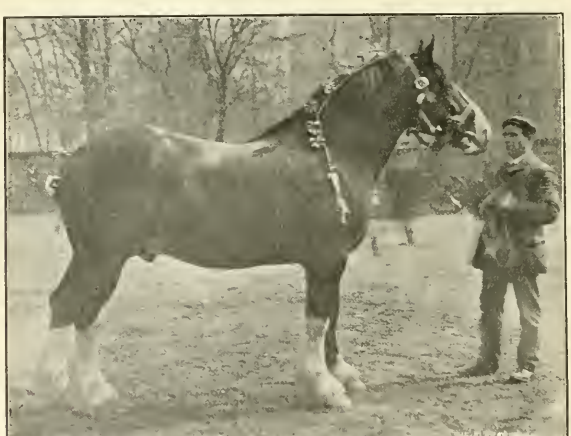
By John Gardhouse, Highfield.

Among the many different topics discussed at the Farmers' Institute meetings, perhaps none has received so little attention as that of breeding and raising horses for profit, and yet it is one of the very greatest importance. With the improvement in prices, it is necessary that increased attention should be given to the breeding of first-class horses. The present price of horses has brought us back to a time when it is profitable for the average farmer to raise them.

Kind of Horse to Raise. The most profitable kind to breed, in my opinion, is a first-class horse of whatever breed is in most demand. For the average farmer the heavy draught horse is undoubtedly the most profitable. In the first place, the heavy draught brood mare is more suitable for farm work than those of the lighter breeds, and can be more successfully worked on the farm. Young draught horses will also earn their keep at a younger age than any other class, and the heavy work on the farm is such as will give the young draught horse the best kind of training for his future usefulness when sold for heavy dray work.

Type. A great deal of the success in horse breeding depends on the selection of the mares that are used for this purpose. Examine your mares well ; breed the very best ; the best are none too good ; study the mating, any deficiency in the mare should

be well made up by the sire. The sire should be a good type of the breed to which he belongs. As a rule, the best sires are found to be of medium size, evenly made and with plenty of quality. He should have a good constitution, good head, forehead broad and flat, eye bright, prominent, mild the jaw should be broad, and the throat clean cut. The neck nicely arched, muscular and well set into the body ; breast deep and broad, with strong muscles ; shoulders moderately sloping and well muscled, covering the blade thoroughly. The back should be short, straight and strongly coupled, ribs well sprung and deep. Loins strong, broad and well muscled, quarters long and powerful, tail well set in; thighs well muscled, strong and broad. Legs short and strong. Forearm large and strong, muscles extending well down the leg. Knee broad and flat, bone below the knee short, strong and flat, of good quality, and free from beefiness, nicely feathered, with straight, silky hair, pasterns not too long and nicely sloping. Feet of good size, well shaped and of good quality. Toes should not turn in or out. Hocks should be clean and



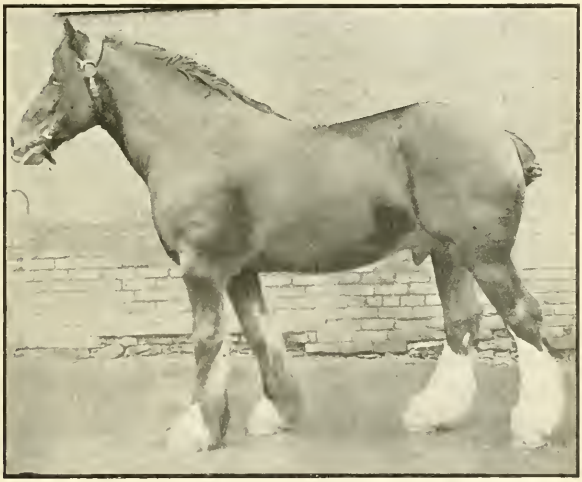
Strathcona (imp.) [3238]. First Prize three year old, and Champion Clydesdale Stallion, Horse Show, 1902. Shown by J. M. Gardhouse, Highfield, Ont.

broad, looking at them either from the front or side, and free from coarseness and puffiness, hind foot a little smaller than the front one. His general appearance should be attractive, his action free, firm and easy, all feet being brought forward in a straight line and firmly planted.

Care. Mares after being bred should not be worked for a few days, after which they may be worked right up to the day they foal, providing you have the right kind of work for them to do. They should not be hitched to any very heavy loads, or on to a tongue that will strike them in the side, and they should not be backed when heavy with foal. After fall plowing is done and you have no further work for them, do not tie them in the stable and let them stand without any exercise ; that is too sudden a change. Let them out in the yard for exercise every afternoon, unless very stormy. A few weeks before foaling, feed a little flaxseed along with boiled oats and bran. The foal having the foal, getting it to nibble at it ; in this way it will soon learn to eat. Never allow the foal to run after the mare when working. Always keep it in a loose box, well bedded, and with plenty of light, but no holes which it can get its head through. Always give

the foal a little feed when you take the mare out. Unless you are working a long distance from the barn, it will pay to take the mare in during the forenoon and afternoon, giving her a drink and a handful of oats, and let the foal suck, thus helping the mare and also the foal. When the foal is weaned, feed it often with good clover hay, chopped oats, and bran, and all the milk it will take. Winter well the first winter. Many foals are allowed to winter around straw stacks and on poor, dry feed, and are very little heavier in the spring than when weaned in the fall.

Always keep good fences around your pasture fields, so that the young horses will not learn to be breachy. If you have any bars or fences to take down, see that every rail is removed so that they will not have to jump over them. Commence to break in the foal when quite young by giving it careful and constant handling.



Lyon Stewart [3732]. First Prize Aged Clydesdale Stallion, Canadian Bred. Toronto Horse Show, 1902. Exhibited by H. G. Boag, Churchill, Ont.

DISCUSSION.

Q. What kind of a horse would you consider the most profitable for the average farmer to raise?

A. John Gardhouse, Highfield: A first-class, heavy-draught horse. The heavy-draught mare is more suitable to perform the work on the farm, and heavy colts can be broken in to do farm work at an earlier age than light horses, and the work on the farm is such as to fit him for future usefulness when sold for heavy-draught purposes in the cities and towns.

Q. Would you advise raising fall colts?

A. Yes. In many cases when mares are required to work hard during the summer, and there is no work for them to do in winter, they can suckle the foal through the winter. Then the foal, after being weaned in the spring, will have the green grass during the summer, and will often be as large in the fall as a colt six months older.

Q. If you had a large carriage, or smallish general purpose mare, would you breed her to a heavier or lighter horse than herself?

A. To a heavier horse.

Q. Would you advise breeding from a blemished mare ?

A. That depends on the nature of the blemish. If it is hereditary, I would not, but if the mare has been hurt it will be all right to breed from her.

Q. What is the best age at which to wean a foal?

A. That depends on circumstances. If the mare is required to do hard work, and you have cows' milk for the foal, it may be weaned earlier than otherwise. From five to seven months is about the time for weaning.

Q. Is clover hay as good as timothy hay for horses ?

A. Yes, for farm horses and colts I would prefer clover hay, well cured and clean.

Q. Is two years old too young to break in a heavy colt ?

A. No. I would break in a heavy colt at two years, to light work. It would not be wise to have him do heavy work.

Q. Do you think it will pay a man with a one-hundred-acre farm to raise colts ?

A. Yes. I think every man with one hundred acres of land should raise one colt each year. He can do so with very little extra outlay, as a mare will do most kinds of farm work and raise a colt.

Q. Would you keep the foal in the stable after weaning it in the fall ?

A. Yes, at nights. If you have other young horses it is well to allow the foal to run with them during the day.

Q. Do you object to white face and feet in horses ?

A. No, not in heavy horses. I would prefer not to have the face and all the feet white, as there are some people who object. There is an old saying that "A good horse is never a bad color."

Q. Is it better to feed oats whole or chopped ?

A. For horses that can masticate them I would feed whole oats, but for young colts or old horses I would have it chopped.

Q. Do you feed clover hay to horses ?

A. Andrew Elliott, Galt : Yes, but do not over-feed. It is such a rich food that there is a danger of over-feeding.

Q. Would you grind grain for horses ?

A. Chas. S. Moore, Stanbridge, Que. : Young horses do as well on whole oats. Old horses do better when the grain is ground for them.

Q. What is the best remedy for spasmodic cholic in the horse ?

A. T. G. Raynor, Rose Hall : I find 2 oz. sweet spirits of nitre, and 2 oz. laudanum, in a pint of raw linseed oil, or water, a good remedy. Oil may be given after. Often when a horse shows the first symptoms one tablespoonful of soda in one pint of sweet milk will do the work.

Q. What is the best time of the year to have a mare foal ?

A. Dr. Henry G. Reed, Georgetown : In the months of May and June, when the grass is at its best. But if a farmer has a good mare, and he needs her in the summer to work, he could have her drop her colt in the late fall or early winter. Feed her crushed oats, some bran, well-saved clover hay, and a few roots. The mare would have plenty of milk to support her foal, the colt would be weaned in the spring and have grass all summer.

Q. What would you recommend to relieve a new-born foal that was constipated ?

A. Inject with a syringe an emulsion of soap suds, oil, and a little warm water. Four tablespoonfuls of castor oil will be enough to purge a colt. Remember that a light road horse requires as much medicine at a dose as a heavy horse.

Q. What would you do for worms in a colt ?

A. In the morning give him a dose of linseed oil (having given him no food the previous night), and two ounces of turpentine. This would be a dose for a colt 8 or 9 months old. Repeat this in two weeks. For pin-worms tobacco is about the best cure. (A dose would be about the bulk of a couple of chews.) Pare it down fine and mix with the food.

Q. What would you do for bog-spavin ?

A. Blister repeatedly. The winter is the best season to do it. Biniodide of mercury, 1 to 6 of lard, rubbed in for half an hour, is one of the best blisters known.

Q. What is the best cure for sweeny?

A. Give the horse a rest. Blister often. Blister for sweeny with about 1 to 8 parts of biniodide of mercury.

Q. Would you consider it in-breeding to cross half-brother and sister?

A. Yes.

Q. Is there any natural law by which you can control sex?

A. Not that I know of.

Q. Would you place a good pedigree ahead of individual merit?

A. I would certainly try for both.

Q. Do you consider it wise to have a mare raise a foal at three years old?

A. No, four years is young enough.

Q. Would you advise crossing a small mare with a very big horse?

A. No, I would rather cross a large mare and a small horse.

Q. Why would you not recommend crossing a Clyde mare with a thoroughbred?

A. Because the cross is too violent.

Q. Do you not think that those imported bronchos may yet prove useful animals on the farm?

A. Most decidedly no.

Q. At what age is it best to wean a foal?

A. About five months.

Q. Does it hurt a brood mare to do light work during the winter?

A. No, it is good for her.

Q. If the naval cords do not break at birth, is it best to cut them?

A. Yes, it is necessary to do so, but always tie a string around the cord before you cut it, to prevent bleeding.

Q. I have a colt with what the veterinary calls "parrot mouth." Will it ever be any good?

A. Yes, but it will probably never do well on short grass, as it will not be able to bite closely?

Q. What breed of horses would you advise a farmer to raise in order to make a profit?

A. Any of the recognized breeds are always in demand, but always try and produce an animal of some well recognized breed, and not a mongrel.

Q. What is the difference between a standard-bred and a thoroughbred?

A. A standard-bred is a trotting or pacing horse, and a thoroughbred is a running horse.

Q. I have a brood mare badly foundered. Will her colts likely become foundered?

A. A foundered mare will not produce a foundered colt, but your mare probably had weak feet, which always predispose to founder, and her foal might have the same kind of feet.

Q. Does the Government give you anything extra for abusing the broncho?

A. No, I do it cheerfully, without any extra pay.

Q. In raising a foal with cow's milk, how should the milk be prepared?

A. Reduce one-third with water, and add a tablespoonful of sugar to every gallon of milk.

Q. What do you consider the greatest fault with the general run of horses in this community?

A. They are nearly all too small; too small even for road purposes; have been bred too often from undersized road horses.

Q. When weaning a foal, do you prefer crushed oats or whole oats?

A. Crushed oats; but a colt will do very well on whole oats.

Q. When a colt is not able to get up and suck when born, how often should it be helped to suck?

A. Every two hours, night and day, and even oftener.

Q. How long should a farmer leave the shoes on his horses?

A. No shoes should be left on a farm horse's feet longer than two months, and on a road horse not more than six weeks.

Q. For ordinary farm work, is a flat foot a bad one ?

A. Not usually, except it be very flat, but it would be a bad foot for road work.

Q. What makes the best poultice for a horse's foot ?

A. Linseed meal is perhaps the best, but almost any clean, warm, moist substance does very well—bran mash, boiled potatoes or turnips, but nothing dirty.

Q. I am thinking of buying an eight-year-old horse, with one foot much smaller than the others. Would you advise me to do so ?

A. No. The small foot is likely diseased.

Q. I have a horse with bad quarter-cracks. My smith has put bar shoes on him. Is that right ?

A. Yes, in most cases bar shoes are all right.

Q. Do you think it possible for a horse with a fairly good foot to do ordinary farm work without shoes ?

A. Yes, if he is kept without shoes all the time, but if he is shod during the winter his feet would be likely to break in the summer.

Q. Is it a good practice for horses in a livery barn to have their feet soaked in a bath tub every day during the hot, dry season ?

A. Yes.

Q. I run a livery barn. I know a splendid young horse which I can buy right, but he has quarter-cracks in his feet. Had I better buy him ?

A. No. He would not be likely to stand road work.

Q. Do you think it is possible to develop new breeds of stock ?

A. I suppose it might be done, but I think we had better devote our time to developing some of the present breeds.

Q. Speaking of the law of atavism, or reversion, do you think it possible for the progeny of any parents to resemble an ancestor three generations back ?

A. Yes.

Q. Do you think you have good grounds for saying that acquired characteristics are transmitted from parent to offspring ?

A. Yes.

DRAUGHT HORSE BREEDING.

By Alex. Innes, Clinton.

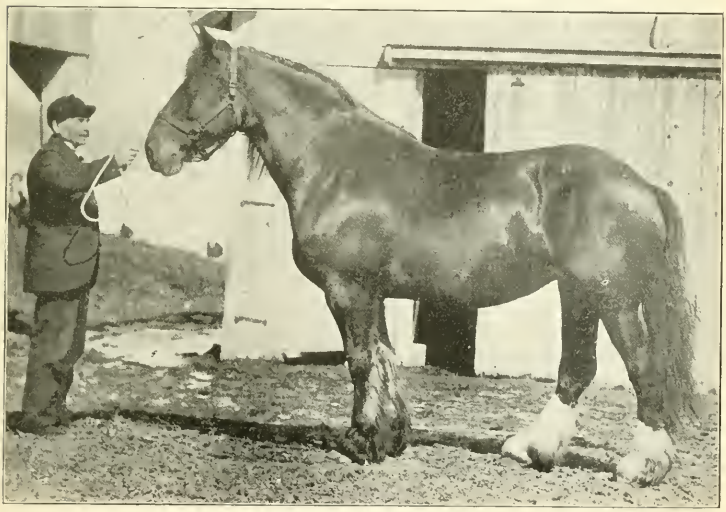
In considering the breeding of draught horses, a few words regarding their origin, as shown by horse history, may not be uninteresting. King John, about 1199, is credited with having done much to improve the horses of his time, by importing 100 Flemish stallions and using them on native mares, and from such blending as this sprang the English cart horse. Edward III. (1327), Henry VIII., and Queen Elizabeth kept up the good work, and in more recent years the efforts for the improvement and development of horses for heavy work resulted in a free exchange of animals between England and Scotland, to their mutual benefit. Lawrence Drew, who I think did more to improve the draught horse than any other man, credited James, Duke of Hamilton (1749) with importing a Flemish stallion for the free use of his tenantry, and, following that, large numbers of English mares were sent into Scotland for breeding purposes.

The Clydesdale. What was first known as the Clydesdale was a nice, clean-legged animal, with good action, first class as an agricultural horse, but deficient in bone and size for heavy work. Since the first issues of the Clydesdale Stud Book there is a marked distinction in what are really different types of a draught horse, although having about the same origin. The Scotch breeders found the American market so favorable to their ideas that for a time they monopolized the export trade. Of late years

the two types are getting nearer together, and I hope it will not be long till it will be hard to distinguish between them, as they are principally for one purpose, and I think it can be claimed that the best of both stallions and mares were those bred on the union of these two types thirty or thirty-five years ago. The breeders of Scotland and England had very little distinction between them, until the registration began.

Avoid Pampering. I am sorry to say we cannot find the number of good animals for heavy work we had ten or fifteen years ago. I think the reasons which contribute to this are high feeding, pampering, and inbreeding. When I began importing thirty years ago, such a thing as a horse not being a producer of some kind was scarcely known, but now they are all too common for the good of their owners or the country.

Don't Use Cheap Sires. Another reason—and the remedy lies in the hands of the breeders of our own country— is this—the want of judicious mating. Instead of encour-



A good type of mare to breed from.

aging and patronizing the best sires, which are usually at a nominal fee, say $12 to $15, they prefer to use any kind of a brute, at perhaps half; the old story, shilling wise and pound foolish. Such men are not only an injury to themselves, but to the district in which they live, as good and plentiful buyers always frequent the districts where they get good stuff. Another drawback at present is that a horse-owner has to be an insurance company also. If a patron loses a mare in foal, the poor horseman is expected to lose his fee, and if the foal dies he is supposed to lose half; but if an owner loses his stallion, his return benefit is simply sympathetic words. Under such conditions, how can importers be expected to import good and valuable horses ? At the fountain head, Scotland and England, things are quite different ; patrons use every means to encourage good

sires, they are selected by societies under guarantee of so much for their service, in shape of a premium, and half fees at end of season, the other half when mare proves in foal. There horsemen can afford to place before the public first-class animals, which are a source of profit to all concerned.

A motion was passed at the Horse Breeders' meeting at Toronto last winter, offering a bonus to newly-formed societies, provided the societies duplicated the amounts. I have not heard the results. It was at least a move in the right direction, but it may take time before the public can see the benefits of it. I do not think it would be wise for those who have registered what are called pure-bred Clydes or Shires to cross in the meantime. Comparatively speaking, these are very few compared with those where breeding is not up to the required standard for registration. But farmers who are not going in for pure-bred studs can make no mistake in crossing the now Clydes and Shires

A good yearling.

for good export, saleable horses. Let me emphasize the importance of building your structure on a good foundation, the main-stay of any horse. We are not a country of horseflesh-eaters, that can eat the carcass when the feet and legs give way. Avoid any constitutional unsoundness, or you will only be once sorry, but that will be as long as you remember the beast.

Finally, I may say, begin at the foundation, with good sound conformation and quality, with good size added, if possible, whether they are Clydes or Shires.

SHEEP BREEDING AND FEEDING.

By Elgin F. Park, Burgessville.

To be successful in breeding sheep it is necessary to give them proper care and attention. They should not be left to pick their living by the road side. We live in one of the greatest sheep countries in the world, and yet, when we look around, how many flocks do we find ? We ought to find a small flock on every farm, but many farmers have not a sheep on their places. Every farm ought to have sheep, if only to assist in tidying up the fence corners. This they will do if they are given half a chance, in that they will trim up grass and weeds in lanes, paddocks, and fence corners. Few weeds or plants will escape their notice. The weeds that one sheep will consume in the summer are about as many or more than the average farm boy can be persuaded to destroy in a single season. In a certain sense, therefore, a small band of sheep are wage-earners.

They ought to be kept to supply the farmers with meat during the warm months of the year. No more delicious meat can be furnished at such seasons, and none is more wholesome. The farmer can, in this way, get much of his meat supply in summer, and get it virtually without cost, since the pasture which makes the mutton would otherwise be lost, or, at least, a great part of it.

Ontario has a climate for sheep excelled by none. It is free from all contagious diseases so common in other countries, and this fact is a decided advantage for sheep-raising. I am glad to say that Ontario has within her borders some of the best sheepmen in the world. She has not only breeders of sheep, but also men who understand fitting them to compete against the world's best product.

At the recent International Fair at Chicago, which has perhaps been the greatest stock show that the world has seen, and at the Pan-American, the Canadian breeders swept all the best prizes in all classes exhibited. Since the World's Fair in 1893, American breeders have drawn almost entirely from the Canadian flocks for breeding purposes, and admit that Canada is the best and only country from which they can procure full-blooded sheep to keep up the quality of wool, and to build up a good-sized mutton sheep.

Every year there passes out of Ontario car load after car load of pure-bred sheep to the Western States, as well as to the North-West and Maritime Provinces, to build up large ranches.

The late fairs have had the effect of turning the attention of the world's best breeders to Ontario, and we trust that a good reputation in this respect will be lasting. At the Chicago Fair sheep that won at the Royal Show in England were not good enough to get third place. This will, no doubt, have the effect of convincing some of us that England is not the only country to produce pure-bred sheep.

Ewes before being bred in the fall should be kept on good pasture, so as to have them in a good strong physical condition. After housing for the winter the ram should always be taken away from the flock. Breeding ewes should not be fed turnips before lambing, as it causes lambs to come weak. After lambing turnips should be fed. Provision should always be made to keep up a good supply of succulent food during summer months. For this there is nothing better than rape, and for fall pasture rye is an excellent thing.

In fattening sheep it is necessary to keep up a continuous, steady growth, so as to avoid uneveness and bunchiness in the carcass. Sheep should not be closely housed, but should be given an open shed, so that they can take plenty of exercise, which is very essential for their well-being. The object in view during winter feeding of lambs is to promote growth. For this purpose you must feed plenty of good hay and occasionally pea straw, with some roots, and a little grain, which would be mostly bran and oats. While the pasture is good in summer, no additional food is necessary. Salt, water and shade should always be within reach of the animals. Care must be taken when the pasture is poor to supplement this with rape, vetches or other green crops. Beginning eight or ten weeks before the time of slaughter, a grain ration should be added. We

feed a mixture of oats, bran, oil cake, peas, increasing the feed and keeping the animals inside the latter part of the finishing period.

Now as to the lambs, we have the breeding ewes in good condition, when lambs are born, then feed the mothers liberally to promote milk production for the benefit of the lambs. We have a place arranged where the lambs may slip through and feed apart from the ewes. They soon learn to eat a mixture of oats and bran, with a little chop, pulped roots and clover. The lambs may be expected to fatten when pasture begins, but it is well to continue the extra ration for them when the flocks come into the barn at night. Again, any shrinkage should be guarded against when the pasture fails.

DISCUSSION.

Q. Would you advise the use of a shearling or aged ram on a flock in preference to a lamb ?

A. Myron A. Gee, Fisherville : Yes, if the flock is over a dozen ewes. In a smaller flock a large, vigorous lamb may do.

Q. Do you breed ewe lambs first year ?

A. No. Your flock would soon become too small in size to be profitable.

Q. Do you wash before shearing ?

A. We generally do. The heat in spring is often oppressive before water is warm.

Q. You lose on the wool, then ?

A. Yes, we get one-third less per pound, but have more pounds. We gain on the sheep doing better without fleeces.

Q. How do you get rid of ticks ?

A. Dip the lambs about a week after the sheep are shorn, and again when they are put up for winter. We open wool every four inches and pour dip in on the skin.

Q. What will cure grub in the head ?

A. There is no sure cure. Prevent the fly from laying its eggs by keeping the sheeps' noses smeared with pine tar. A good way to do this is to split a log, lay it flat side down, bore two-inch holes on the upper side, two inches deep, and put salt in the holes and smear tar on the sides. The sheep in getting the salt get sufficient tar to keep the flies away.

Q. Should sheep be closely confined in winter ?

A. No, an open shed facing south, free from draughts, and dry under foot, will answer very well. They will do better in a yard where they are not molested. Keep ewes tame.

Q. What should they be fed ?

A. Let your sheep run on stubble, so they can come into winter quarters fat. This is the secret of raising good lambs, and of wintering sheep well. Feed good, bright pea straw, clover hay once a day, and a few roots. A few peas and oats mixed will be acceptable. Of course, it is necessary to keep salt convenient for them all the time, and water once or twice a day.

Q. How many lambs should a ewe raise ?

A. Your flock should average a lamb and a half per ewe.

Q. Is a twin more apt to throw more lambs than a single ?

A. I think it has something to do with it, but having breeding stock strong and vigorous at time of mating has more influence.

Q. We believe we have a good sheep district here (Parry Sound). How do you think our sheep compare with Southern Ontario ?

A. T. H. Mason, Straffordville : Very favorably. When at the Pan-American in Buffalo last year I went out to East Buffalo Stock Yards. There were about 6,000 sheep and lambs in that day. The two best lots were from Ontario, one lot from near Woodstock, and the other from South River, Parry Sound District. They would average over 90 pounds. I was surprised to find your lambs on the market so early. I thought they would be two or three weeks later than southern Ontario, but I find your lambs mature quite as early as ours do.

SHEEP RAISING.

By R. J. Hine, Dutton.

Why is it that so little interest is taken in the sheep industry by the average Canadian farmer ? It must be that he does not think there is as much money in it as in some other lines, such as dairying, hog-raising, fattening steers, grain-raising, etc. How small a percentage of farmers give their main attention to that particular branch of farming ! How few of us believe that it is the most profitable part of our business! There must be some good reason for this state of things. Is it the fault of the sheep or of the management ?

I will not go into the labor and cost of dairying, hog-raising, etc., but if we gave one tithe of the care to our sheep that we give to growing special crops of fodder and grain to force the flow of milk of our cows, and to hastily fatten our hogs, what a different result there would be in the profit from our flocks. What attention do the ordinary mutton flocks of the country receive ? Very little. They are either put on the road, to live the best they can, to be chased backwards and forwards by all the useless curs that may pass along, or they are turned into the poorest pasture on the farm, where nothing else would be expected to live and pay its way. When the lamb-buyer comes in the fall to look at the lambs, and finds some melancholy-looking specimens, perhaps covered with burrs, and some not castrated, for which he (on that account) will pay a poor price, the farmer comes to the conclusion that there is no money in sheep anyhow. By way of contrast, let us look at the flock of a good farmer on a hundred-acre farm, who takes an interest in his sheep. He has about twenty ewes, all good specimens of the breed he fancies, not pure-breds, but you can hardly tell them from pure-breds, for careful to use a pure-bred ram, retaining his best ewe lambs every year, and when it when he started his flock he just bought some common grade ewes, but he was always was necessary to purchase another ram, always getting one of the same breed, and the best specimen of the breed to be got, until now he has a flock that would equal in appearance a flock of pure-breds.

But some of you would say, I want to change my sheep every three or four years, because they will not do well any longer on the same land.

This man knows too much to listen to any such exploded theory as that. He knows when he selects from some good, pure-bred flock a strong, heavy-fleshed, low-set, broad-backed, well-covered ram, with a strong masculine, but not coarse head, a good type of the breed he fancies, that he is going to improve his flock. An acquaintance of mine (one out of four or five who were buying lambs this fall) told me he had sold 25 ram lambs to farmers for use in their flocks. I do not know how many the others will have sold, probably as many each. These lambs were of mixed breeding, which would mean that perhaps one hundred scrub rams in one township were used for breeding. What can these men expect from such management ? What would they think of using a mongrel aire for their mares, cows or pigs ? They would say it would be the greatest folly. The folly is just as great with regard to their carelessness in not selecting good sires for their flocks.

Do you suppose those wide-awake Yankees would be coming over here and taking our best pure-bred rams for their own use, at good long prices, unless there was money in it ?

I know two Lincoln flocks in England that have been kept on the same farms by father and son down, for 125 years, until now they have arrived at such a state of perfection that the fact of a Lincoln sheep being bred by Dudding or Dean is a guarantee of its superiority. Sheep from these flocks took about all the prizes offered for that breed of sheep at the World's Fair. I think this fact should be sufficient answer to those who are continually changing their flock. I would say to such, change your management, not your sheep.

Another thing that probably would be done in preparation for these twenty ewes would be to give them as additional pasture a strip of turnips or mangels, a bushel and a half a day, few with good, clean pea straw twice a day, and an occasional feed of clover will take them along until within two or three weeks of lambing. Then a few oats would help to bring on a stronger lamb and put the ewe in a better condition to give a good flow of milk. Two or three acres of rye, to turn into early, would keep the flock going for five or six weeks, when the piece could be plowed down and rape sown. This would come in nicely for the lambs at weaning time, and would send them on ready for the market, and at very little cost. If you could have an acre or two of peas and oats to follow the rye you would need very little pasture, except for a change.

Another good plan for sheep pasture, where corn is grown, is to sow about a pound and a half of rape seed broadcast, the last time of cultivating. I did that one year, and our sheep nearly lived there until the 10th of February, when the first deep snow came. They used to come in every night, and I gave them a little oats in the morning before going out, just to keep them scouring.

I think, by a little extra care in growing some special crops, by using the best rams procurable, and by improving the quality of the lambs, we could get better prices, at a less cost of production. If one is not afraid to invest in pure breeds and make a bid for the American trade, there is still more money in it. One need not be afraid of glutting the market if he produces the right sort, for there is always room at the top.

THE BACON HOG.

By W. S. Fraser, Bradford.

Much has been said and written of late on this subject, yet at Institute meetings it is still a live topic. From discussions we find, too, that many farmers are still following wrong lines.

The bacon hog is one with long body, medium shoulders, deep sides, ham remarkable for length, rather than thickness, back not wide, slightly arched, and carrying width evenly along, full over loin, no crest over the shoulder, sides straight, so that a straight edge will touch evenly from fore part of shoulder to rear of ham. From front of shoulder to point of nose should be tapering, with a slight bulge at jowl. This hog developed to the weight of 180 pounds, with about one and a half inches of fat, evenly distributed along the back, the sides reasonably thick with marbled meat, is an ideal bacon hog, and most suitable for making Wiltshire sides. For such hogs packers will pay 50 cents per hundred more than for any others, and their value sets the price for all others.

How to Produce the Bacon Hog. The breeds from which to get this type of hog are notably, the Yorkshire and Tamworth and their crosses. Either of these crossed with the Berkshire gives good results.

Selection and Care of Dam. Care should be taken when selecting a sow for breeding. What is wanted is a thrifty, well-proportioned animal, with long body, well set on good, strong legs. She should not be too coarse, and should have at least twelve teats, thus showing the capacity for good, large litters, with the accommodation for raising them.

Young sows should be liberally fed on flesh and bone-producing foods, such as ground oats and wheat bran. In summer they should have a run on clover, and in winter comfortable quarters, with access to a yard. It should never be forgotten that exercise is essential for breeding sows. Sows should not be mated before they are nine months old At all times they should be kindly treated. A good brood sow is worth caring for, as she is more profitable than a brood mare. Her progeny mature more quickly, do not require such expensive stabling, are exposed to less risks, and a ready market is always obtainable for them.

In winter a ration of grain, roots and clover hay, with access to a yard for exercise, is an economical and suitable way of caring for brood sows. The farrowing pen should

be roomy and warm, with just a sufficiency of litter. In very cold weather it is a good plan to heat a couple of bricks and put them in a basket, cover with chaff, and then put the young pigs on this until all are farrowed, when they may be placed near the teats. For the first twenty-four hours after farrowing give the sow nothing but perhaps a drink of warm water, as food or slops may kill her. The act of a sow in eating her young is often the fault of the owner in feeding heat-producing food prior to farrowing, and giving little or no exercise.

Yorkshires and Tamworths make good mothers, and usually produce larger litters than most other breeds. I know a Yorkshire sow that gave birth to 22 pigs at one litter, and raised 14 of them. Ten or twelve well-nourished pigs are more profitable than a larger number insufficiently fed.

After farrowing the sow should be fed very moderately for a few days, as liberal feeding may produce milk fever. After arriving at her normal condition, feed her all she will eat up clean. As the pigs grow older, provide some way so that they can get at a small trough outside of the pen, where some ground oats or middlings are kept moistened with milk. This helps them wonderfully, and prepares them for doing for themselves. Castrate at about five weeks old. In case of ruptured pigs, when castrating make as small an incision as possible, push the bowels back carefully, and put in two or three stitches with a strong needle. Wean the pigs at seven or eight weeks old. In doing so have some consideration for the sow, and shut her out for, say, twelve hours, and then return her for a few minutes. Repeat this for a couple of times, as it relieves the sow very much and helps the young pigs along. The sow may again be mated about the fifth day after the first separation.

Development of the Young Pigs. Much of our success in hog raising, both as to economy of production and quality of product, depends on how we care for the young pigs after weaning. The old saying that "feed is half the breed" is true, if we include the methods of feeding. Feeding is largely on food that tends to produce fat, without sufficient exercise being given, will often change a little of Yorkshires into a thick, fat type, or may cause such a derangement of the digestive organs as to founder the young pigs This is a most serious condition, and will render them profitless.

Indigestion may show itself by the pigs falling in flesh, loss of appetite, roughness of hair, scaliness of skin, teeth becoming black, etc. The last condition is often thought to be the cause, rather than the effect. It is, together with the others, but an evidence of injudicious feeding. In some cases young pigs become so fat that they die from what is known as "thumps." In all these cases proper food and exercise will prevent, and, in a measure, remedy them. "Prevention is better than cure."

Foods. Shorts and skim milk is the ideal food for young pigs. Where milk is not to be had, shorts moistened with kitchen slops is good. In a month's time a mixture of oats and ground barley may be added. As the pigs grow older whole peas, steeped for twenty-four hours, may be fed. Roots in winter and clover pasture in summer will in all cases reduce the cost of production. Well-cured clover hay may be given in small quantities in winter, and will be relished and utilized to good advantage. Charcoal or hardwood ashes and salt should be within reach at all times. Prof. Henry gives the result of an experiment with bone meal, fed with corn. He found that 28 per cent. less grain was required to make 200 pounds of pork; hardwood ashes and salt had nearly the same effect. We learn from this that by the use of this condiment the cost is reduced by nearly one cent per pound.

Wrong Impressions Concerning the Bacon Hog. When the bacon hog was first introduced many farmers were shy of him, thinking that he would be hard to feed, but experiments that have been made with the different breeds to ascertain if possible which breeds give the best results for food consumed, go to show that no one breed can claim a superiority in this, as different breeds came out ahead at different times. Experiments show that as much depends on the individual as on the breed. Another wrong impression that prevailed was that by selling hogs at 160 to 180 pounds weight we were losing money, as it was thought that at that size the frame was grown and additional weight could be added at less cost per pound. Experiments time and again show that the

first fifty pounds cost less than the second, the second fifty pounds less than the third, and so on. (Feeds and Feeding, Prof. Henry.)

Exports. Last year we exported thirteen million dollars' worth of pork—ten millions from the Province of Ontario—and some millions more have been sold for local use. This means that farmers have received a large amount of money for hog products. Yet, from what packers say, we have not received all that we might have had for the same quantity, as only 40 per cent. of it was No. 1, 45 per cent. being thick, fat and lights, and 15 per cent. damaged. The latter is caused by abuse in marketing, partly by farmers, and the rest by drovers and their employees striking many blows when driving, loading, etc. This is a loss to the country and reverts on the farmer. Every means should be taken to prevent this loss.

When to Market. Packers are warning farmers against marketing hogs in the months of November and early December, for the reason that in six weeks from the time hogs reach the packing house they are laid down in the British markets, and hogs marketed at that time of the year come in conflict with game and poultry, etc., of the Christmas market, and consequently a lower price is usually obtained.

Farmers should keep one eye on the hog and the other on the markets, and keep well posted on the latest methods of feeding and marketing.

DISCUSSION.

Q. Is the present price of bacon likely to continue ?

A. Major Sheppard, Queenston : For a year, or perhaps two years. Hogs are still scarce and high in the United States and Denmark, and the high price of coarse grain in Ontario will prevent the farmers from rushing into the hog business, as they did a few years ago. In fact, it will prevent them making hogs of themselves !

Q. Which do you consider the best bacon breed ? Would a cross between Chester White and Tamworth be desirable ?

A. I see no objection, provided the Chester White were of a good type, but I would rather depend on Berkshire, Yorkshire and Tamworth.

Q. What is the reason that sometimes we see hogs quoted at a higher price in Chicago than in Toronto, and at the same time Canadian bacon is much higher in London than American bacon.

A. The American market is a home one only. Only 25 per cent. of their hog products are exported, and consequently the home demand regulates the price. On the contrary, the Canadian market is an export one, only 25 per cent. of our output being consumed at home. The result of this is that American packers are able to control the trade, and when a shortage occurs boom up the price for a short time, but you will find, taking one month with another, that the price in Toronto is from 25 to 50 cents per hundred better than American prices.

Q. What is the reason hogs drop in price suddenly, when there is no change in the price of bacon ?

A. When the packers, who keep posted, notice the killings the preceding week have risen above the average, they are likely to drop the price, expecting that the increased supply will be followed by lower prices and a weaker demand.

Q. At what age do you like your sows to farrow first ?

A. J. W. Clark, Onondaga : Not before one year old.

Q. What time in heat should a sow be served ?

A. Don't know that that makes any difference, as long as she stands quiet. It is not wise to have them romping with other pigs after service.

Q. Do you think that excessive service of the sire produces runts ?

A. It might have a tendency to, and more of them.

Q. What kind of a pen do you like for winter feeding ?

A. I prefer a wooden building to a stone or cement one. A cement floor would probably be all right if you had a raised sleeping pen.

Q. What should be the age of pigs before they are turned off ?

A. From seven to eight months ; they are inclined to be soft if forced off too young.

Q. Do you like the pigs confined in winter ?

A. They should have exercise on fine days, but should not be allowed to run from one neighbor's place to another, or all over the farm. By so doing you would make athletes of them.

Q. What is the cheapest hog feed in winter ?

A. Cook pulped sugar beets or mangels and add finely-cut clover, well cured, mix chop or shorts and add a little salt to season. It is a mistake to feed this too sloppy. The roots, clover and chop make a cheap, bulky food. By putting the cut clover in the hot, cooked roots it softens it like green clover, and they relish it fine.

Q. Would you give water between meals in winter ?

A. Not with this feed. It is a mistake to give pigs too much water in winter.

Q. Do you think that a man can make more money by turning them off at 175 lbs. than by keeping them to 210 lbs.?

A. Our packers like them better at about 180 lbs., and we should try to suit them if we wish to have our markets in the Old Country improved. There has been a tendency among feeders to make hogs too heavy and fat to make ideal Wiltshire sides.

Q. Supposing a right type of hog was fed to over 200 lbs., would it be condemned ?

A. That depends largely on the markets. It is safe to sell at 160 to 200 lbs., rather than run the risk of going over 200 lbs.

Q. Which breeds do our packers like best ?

A. It is becoming universal among packers that the improved Yorkshire and Tamworth are best.

Q. Are not Yorkshires preferred to Tamworths ?

A. The Tamworth is deficient in the hams and thin in the belly.

Q. Does not the Tamworth excel in the head ?

A. They certainly do have a lighter jowl, but the head is of no use to make a Wiltshire side.

Q. Are the Berkshires condemned for bacon hogs ?

A. Not if you have the right type, but as a breed they have a tendency to heavy shoulders and thick fat on the back. We can select a right type from most of our breeds.

Q. Does not the Berkshire and Tamworth cross make a good bacon hog ?

A. They do if you have the right type of Berkshire, but if you do not you will have thick fats.

Q. What care should a brood sow have ?

A. They should have plenty of exercise and a feed of roots and grain each day. It is a mistake to think a sow carrying a little of pigs should be fed roots and no grain. If you do you will have weakly pigs.

Q. Have you any trouble with sharp or black teeth ?

A. I do not think there is any harm from black teeth ; it is the sharp ones that cause the trouble.

Q. How would you treat them ?

A. When the pigs are two days old I take a flat file and file off the sharp ones. I find this much better than pulling or breaking them off.

Q. Would indigestion in the dam be the cause of black teeth in young pigs when farrowed ?

A. That would probably have a tendency to cause them, but I find most pigs have them.

Q. Have you any limit to the amount of skim milk you feed pigs ?

A. Yes, you get more value by feeding 3 lbs. milk to 1 of grain. If you double the quantity of milk you lessen it one-half in feeding value.

Q. Do you think it good policy to wean at six weeks ?

A. Yes, if you have accustomed your pigs to taking a little feed from a special trough

Q. Would you leave the runts still longer with the dam ?

A. If I had plenty of room. They would gain in about a week or ten days.

Q. How much litter do you give your sow when farrowing ?

A. That depends on the pen. If it is a warm one very little does. If it is a cold one in cold weather you need more. Chaff or cut straw is preferable to long straw.

Q. Does it pay to cook feed for pigs ?

A. That depends on what you are feeding and the pen you have. If a cold pen, I like to give them warm feed. Cooked food is more easily digested, and the young pigs do better on it.

Q. Why does the market take such a drop in the fall of the year ?

A. There are two reasons. One is caused by the English market dropping at the holiday season, as there is more poultry used at that time. Another reason is that in the fall most farmers have their spring litters to turn off, and for a time the market is flooded.

Q. Have you fed any ensilage ?

A. Mr. Nodwell, President of Centre Wellington Institute, is feeding two hundred hogs on corn ensilage. He sows the North Star Yellow Dent corn, cuts it quarter inch long, and puts in the silo. He mixes this ensilage with mixed chop, two-thirds ensilage and one-third meal ; gives roots at noon. A they get to weigh 125 pounds he increases the grain mixture with the ensilage to finish, and can produce hogs at less than 4c per pound on this feed in winter.

Q. Would you feed all the roots a pig will eat ?

A. Roots will not hurt a pig if fed in large quantities, if you do not give too much drink. If you are feeding many roots your pigs will not require any water, as the roots are 85 per cent. or 90 per cent. water themselves. You should always feed some grain with roots to balance the ration.

Q. What causes pigs to cripple in winter ?

A. There are many causes. Feeding too much fat and heat-forming foods, damp sleeping quarters and lack of exercise.

Q. How do you cure them ?

A. If bad give them 2 to 8 ounces of linseed oil in milk, according to size. Change feed; keep in warm pen where exercise can be taken. If bowels are kept right there is little danger of crippling.

Q. Is linseed meal good feed for pigs ?

A. Yes, if fed in limited quantities to growing pigs.

Q. Do pigs require salt ?

A. They seem to relish it, and it is better to give a little in the feed.

Q. Should a boar kept for service be kept thin ?

A. Not too thin. He should have plenty of exercise and be fed on roots and grain. A hog kept on roots alone won't produce strong litters.

Q. What causes stiffness in hogs ?

A. Myron A. Gee, Fisherville : Over-feeding and damp beds. Constipation and stiffness seem to go together. By letting them out for a run it can be avoided. Also have pens bright and dry.

Q. What medicine would you advise ?

A. Prevent it. As a medicine ½ saltpetre, ½ sulphur, one teaspoonfull to hogs weighing 100 pounds, is very good, but get them out doors.

Q. What is the cause of sows having no milk ?

A. Generally caused by feeding sow heavy or strong feed immediately after forrowing. Don't feed for twenty-four hours unless it be a very thin bran mash, with chill taken off it.

Q. Why do sows eat their young ?

A. Generally caused by too close confinement and too heating foods.

Q. At what age should pigs be taught to eat ?

A. We feed sow in trough 4 feet long, 12 inches wide, and 3 inches deep and let them eat as soon as they see fit.

Q. What do you feed at weaning ?

A. Skim milk and scalded shorts, also ground oats, with roots or other vegetables. They will eat clover hay well.

Q. How do you kill lice on hogs ?

A. If pigs are small dip them, if to large spray, using sheep dips. A little machine oil or lard rubbed behind the ears is a good thing.

Q. How many litters should a sow have a year ?

A. Two. When you get a good sow keep her and keep her at work. She should raise twenty pigs a year.

Q. Does it pay to feed hogs roots ?

A. W. S. Fraser, Bradford : Yes, a ration of mangels or sugar beets in addition, will develop the hog at less cost than feeding wholly on grain.

Q. Why feed charcoal to hogs ?

A. To keep their digestive organs in good condition.

Q. Why do pigs get foundered ?

A. Over-feeding on grain, with little exercise.

Q. Can we not profitably feed hogs to two hundred and fifty pounds weight ?

A. No; the heavier the pig the more it costs to add a pound welght. Better give the food to young pigs.

Q. What do you consider a good gain for a pig ?

A. J. W. Clark, Onondaga: One pound per day. I have had them gain at two pounds a day.

Q. How would you feed the brood sow ?

A. A few sugar beets, a litle corn and plenty of exercise.

Q. Is it good for the small pig to eat with the sow, when very young ?

A. No. and they do not do it if the sow is a good milker.

Q. Can you do without skim milk ?

A. Yes, by mixing sugar beets, cooked with cut clover hay, and some oil meal mixed with it. Mix it stiff and allow it to sour a little.

Q. Do you approve of pure blood in both sow and boar ?

A. Yes, I like it better than a grade sow and pure bred sire.

PROFITABLE HOG RAISING.

By Wm. Bunt, Kemble.

In bringing forth a few ideas in connection with the pork industry. I do not wish to pose as an authority on the subject, but rather to voice the views gleaned in a humble way from my own experience. I am always willing to learn and receive any suggestions which may be of benefit, to aid in dealing with the management or in the trade of this most useful and valuable article of consumption.

My topic it will be observed deals principally with the animal during the cold weather period while under confinement. I need only to add that for summer, a run of good clover pasture, access to orchards and grain fields, gleaning will be an advantage for the growing period.

In introducing the subject we might use an old trite saying, " A place for everything and everything in its place," this can be made applicable even in dealing with this animal—the hog. One of the first things necessary is to have a proper place to keep it. For a pig to be poking its nose into everything and shoving itself into many places it ought not to, often brings down on itself the wrath of the individual, who may to a large extent be responsible for the trouble. No animal on the farm is made a target of more than this one. It is the butt of a stone or a club or anything which comes first, and the sport of every man's dog, and too often we fear is left to shift for itself, and in conse-

quence has often very short rations. Its wants are but few and very reasonable, good food and drink, and a comfortable place to rest.

Like other animals it is susceptible of kind and generous treatment, and will soon repay with profit, the proper care and attention given.

Kind of Hog. In selecting the female for breeding, she should conform to the type and known as the long bacon hog, with plenty of places on her brest for the nursing of her young. It is desirable that she be kind in disposition, and inclined to be friendly. As to breed, I like the Yorkshire very well, crossed with either Tamworth or Berkshire. Unless you have warm and suitable quarters, April is soon enough for the young litter to make its appearance, as they are apt to get chilled, also to be crushed by the mother.

Kind of Pen. Without going into detail as to size of building, which should be roomy, it is important that it should be warm, dry, and clean. Keep out cold and have the floor made of lumber and free from draught. Cement is all right, but being cold to the skin, the sleeping apartment should be floored with lumber. Do not have an over-abundance of bedding, but a moderate quantity of short matrial.

Treatment Before Farrowing. For some days previous to farrowing the sow should be introduced to her room to get aquainted with it, for to be shut into a strange place the moment before the birth of her litter, they sometimes are dissatisfied get restless and cross, and endanger the lives of many, if not all of their progeny. Just before farrowing do not feed too much cold raw food, or a surfeit of grain, but feed warm mash, bran, shorts, or a little oats or barley chop, some warm milk, or wholesome slop from the house, and a few roots. The same diet will apply after farrowing, but do not be in a hurry to feed for a few hours, nor intrude into her apartment with too much noise or bustle. It worries and excites her. There are liable to be great damages and loss incurred by the sudden rising to bid defiance to an unwelcome intruder.

It is very important beoth before and after birth, to see that there is not too much coarse bedding. It will be bunched by the mother, and the little ones will not be able to get around easily, and may get crushed by her. After a few days she may be let out alone. Too much confinement is not good, and being shut up with her young, she is liable to throw them around and hurt them.

Care of the Young Pigs. As the little fellows get older, they drag more heavily on the parent, who should now be fed liberally. When they show signs of picking for themselves, a few grains and sliced roots may be thrown to them on a clean floor, when the mother is out. Or have a room partitioned off, and an opening for them to creep through, where they can eat without molestation, or drink from a small trough. Do not give them too much food, or let it lie and become stale.

Feed the mother well, and this is a very good way of feeding them. They may be weaned any time after four weeks. Eight weeks old is a good time to wean them. In weaning them the sow should be let in with them at least twice, a day or two intervening. At this time they demand your most particular care and attention, as by exposure to cold and damp, over-feeding and under-feeding, it is possible your hopes may be blighted. Feed warm milk, slops from the kitchen thickened slightly at first with shorts, bran, and a little oat and barley meal. Feed grain sparingly for the first one hundred pounds of their weight. Give them all the roots they will eat, also a little clover, green or in hay, and an occasional feed of ashes, sulphur and salt. Oats, barley and peas, mixed and chopped make a good feed, but rather expensive. Give less of peas at first, and increase as nearing the finishing period. One of the best lots I ever had, was a spring litter fed on soaked peas, slop thickened with a little shorts, and finished on grass.

The Growing Period. A one-rule method of feeding may not be successful always, as conditions vary. It may be from the weather or something peculiar to the animals themselves. Some litters I have been able to feed heavily, and others only very carefully for fear of crippling them. By care and practice a person can find out a proper method, and should aim to carry it out systematically. I have found that grain with the milk

and slops from the house, fed morning and evening, with roots for the noon meal, is a very successful plan. The animals get lively and healthy. Running out of meal is a great mistake, and should be avoided. Running to the granary and taking the first thing that is handy, to satisfy the animals, is wasteful and unsatisfactory, and if indulged in to a great extent, will soon make them unthrifty, and it will be a serious loss to the owner. Some recommend to let them out for exercise once in a while, but I am inclined to think it makes them restless and uneasy. Dividing the room into two, I find a very good plan, if the space permits it, with a low fence for them to jump over in passing from one pen to the other. Do not keep too many in one pen unless the space is large, and has plenty of troughs. Troughs should be the proper height, with slats nailed across to prevent them from crowding each other from the trough, and this also keeps the food clean. The slats should be nailed to the outer edge of the trough, on an incline up to the wall. This prevents them from getting across or monopolizing more than their share, and keeps the stronger from rooting off the weaker ones.

Now feed regularly and carefully, increasing in strength and quantity, as your judgment sees fit. Your object should be, not fattening exclusively, as is too often the case, but growing and moderately fattening until they reach the desired weight of 160 to 200 lbs. The last few weeks they should be fed principally on grain. Again I would like to impress the importance of keeping them clean and dry. Remove the soiled and damp bedding often, and replace with a little dry straw. Clean wheat straw is preferable, as it does not keep damp, or pack and heat as quickly as the other.

While there is a great variety of material fed to pigs, we should remember it is the properly matured animal that has gained for Canada the place of honor, and we regret to state that often the man who produces the right material, too often fails to reap the reward and benefit to which he is entitled. Until the purchaser discriminates in favor of the best, we fear too many will fall into the temptation of producing the cheaper, but inferior article.

In spite of repeated warnings and advice, a large number of hogs are overdone, too thick, too fat, to meet the popular demand, as the enquiry is for the long lean animal. Our duty and aim should be to strive to reach that standard and go on with that object in view.

Do not brag that you fed your hogs on boiled turnips and other sloppy material, not costing you much, while your neighbor fed his largely grain. He is making an effort to produce a good article to the credit, not only of himself, but his country and its products as well, while you for a little personal gain, may not only create a prejudice against, but bring disaster to the trade in this most useful and valuable article of food. How often we hear of sloppy pork, the result of poor feeding. Too often is seen the improperly cleaned article, covered with perhaps a little pea straw or perhaps a horse blanket, exposed for sale, as an article of food from which people turn away in disgust. Under such conditions the price cannot be expected, as is expected by the individual who produces the right article, in clean, wholesome and an attractive form ; but we regret we have to confess, that the person who is deserving of does not always get the credit and benefits to which he is entitled.

The pork industry has gone forward lately with strides and bounds and let us keep it up by producing the good article.

It has been said "It is harder to hold a trade or a position than to get it." Let us not only strive to get it, but hold it, we have the material and ability, let us make the best use of it.

We must all pull together to produce a good uniform material, therefore, it behoves us all to take a step forward in order to keep up prices and quality to meet requirements.

If we suit the trade of John Bull (which we can if we will) he will buy largely of us, he has lots of money, but he must have the very best article. If we can supply the British Market with the very best kind of bacon, there is no doubt that Canada can hold the balance of trade in this as well as in dairy products.

DISCUSSION

Q. Have you ever compared the keeping of Yorkshire and Berkshire sows ?

A. J. W. Clark, Onondaga : I can keep five Berkshire sows as easily as three Yorkshires, or three cross breeds. A Berkshire sow can be kept cheaper. Often the pigs develop too fast, and get too thick and fat.

Q. What about black teeth in pigs ? Would they be better taken out ? If so at what age.

A. They are the result of bad nutrition, and are sometimes caused by the presence of wolf teeth, which should be filed down and taken out, when the trouble will be allayed.

Q. What difference would feed fed to a sow before having pigs have on the progeny?

A. T. G. Raynor, Rose Hall : Foods that are deficient in bone and muscle-forming material fed to a brood sow would mean a weak and inferior litter of pigs. Feeding too many roots in winter and allowing sows too much succulent food, such as rape in fall, mean weakly pigs. A brood sow should have a variety of foods to do the best, especially bone and muscle-forming foods.

Q. Do you find it advisable to wean pigs at six weeks in winter time ?

A. No, as a rule I should favor leaving pigs on the sow two weeks longer.

Q. What age should rape be for hog feed ?

A. If sown broadcast pasture when eight or ten inches, but if in drills I would allow it to get more mature, or from one foot to two feet high.

Q. Would not the good results of feeding ensilage be on account of plenty of grain in it ?

A. Yes, there would be something in that, but it also gives succulency and bulk to the food, which all pigs require where they do best.

Q. Do you approve of feeding buckwheat ?

A. No, not alone. For finishing pigs a portion of the grain ration might be made of it.

Q. How do you feed oil cake to pigs ?

A. To young pigs after weaning I would mix oil cake with roots, shorts and clover hay, then steam or cook. Where milk or whey is scarce, oil meal in this way may be fed to take the place of skim milk. To older pigs it may be mixed with the grain in the ordinary way of feeding. The amount must be regulated to the size of the pigs and the influence it may have on the bowels.

Q. Does it pay to shell and grind corn for pigs ?

A. As corn should only be fed to bacon hogs in the finishing stages to any extent, I do not think it does pay to prepare the corn in the way proposed. If it is used for feeding to young pigs it should be used in small quantities and ground fine. Skim milk or whey should be fed with it.

Q. How much should a strong thrifty pig gain per day from birth to maturity ?

A. I am content if I can get a gain of one pound per day.

Q. How much oil cake can be fed to pigs per day ?

A. About one pound for every ten pigs.

Q. Does corn cause soft pork ?

A. Too much corn fed to young pigs especially, may cause soft pork, but even a large proportion at the finishing stage has no such effect. Feeding skim milk with corn will counteract the tendency of corn in producing soft pork ?

Q. Do you have concrete floors ?

A. Yes.

Q. Do you approve of raised sleeping pens ?

A. Yes, especially where you have concrete floors ; but care should be taken not to make the sleeping berth too large, as they will like to stay in it too much.

Q. Should we force our pigs up to to 200 pounds at 5 or 6 months, or let them go slower, say 7 or 8 months, and which would be the most profitable.

A. I believe if we are to hold our market in quality it is preferable to go slow and grow them longer, and I believe it is more profitable, provided we supply green foods for summer and winter.

Q. Do you think lucerne a good hog food ?

A. Unquestionably so. It is one of the best.

Q. Will clover or lucerne pasture affect the pork in producing softness ?

A. Not when fed with the by-products of the dairy, and the finishing of the last month or so is done with mixed grains.

Q. Which is the best breed of hogs, Tamworth of Yorkshire ?

A. Judged by the bacon requirements I belive the Yorkshire is preferable. The Danes (who are our strongest competitors in the English market) thing so, and the majority of packers think the same. The Tamworth is a little deficient in the belly part, being too light.

Q. Does it pay to pasture hogs ? or cut food green and feed in pens ?

A. I prefer to pasture. Labor is too scarce and high-priced to cut and feed.

Q. Where hogs are raised largely on clover and grasses, what breed will give the best results ?

A. T. H. Mason, Straffordville : I believe that Berkshire is about as good a grazing hog as we have, and when grown in this way with a small amount of grain at finishing time, makes a very good bacon hog.

Q. Why do you advocate growing hogs here ; (Muskoka and Parry Sound District) this is not a grain growing section ?

A. While under present conditions it will not pay to go into hogs as extensively as we do in Southern Ontario, still I believe it would pay every farmer to keep a breeding sow, for all keep cows and make butter at home. Clover and grasses succeed admirably everywhere. Hogs, with a very small addition of grain, can be grown successfully on clover, grass and dairy by-products in summer. In winter substitute cut clover hay and roots.

Q. What do you think of elevated beds for pigs ?

A. They are giving good satisfaction. To winter hogs successfully it is absolutely necessary that they have dry beds.

Q. Have you any experience with cement floors ?

A. No. Mine are plank, but when they go I shall put in cement. I am satisfied they are all right where plenty of litter is used.

Q. Is it profitable to feed corn in the ear ?

A. Yes, of course. I ould not feed corn alone to pigs. We always use shorts and other grains, and in fact feed very little corn to pigs under 100 pounds live weight. After that a percentage of corn may be safely used, say one-half of grain fed.

Q. How about cooking feed for pigs ?

A. We always cook or scald the shorts and meal for small pigs, up to about three months old. After that uncooked food will do. In cold weather always take the chill off food. Never give them cold, frozen food.

Q. What do you think about rushing the pigs up to 200 pounds at six months ?

A. We must consider the demands of the export trade in this matter. A little slower growth would produce more lean flesh ; hence I would prefer not to crowd too fast.

Q. Don't you think that pigs are often fed too much sloppy food ?

A. Yes, especially in cold weather. It is very easy to spoil a pig by loading the stomach with too much slop.

Q. Do you feed hogs dry meal or wet ?

A. We feed wet, although experiments show slightly in favor of dry feeding.

Q. How do you feed wood ashes ?

A. In taking the ashes off in the morning always wet the coals so as to preserve the charcoal. We throw it on the floor, although I suppose a box would be better. Never throw it in the trough.

Q. Do you think ground oats good for pigs ?

A. Yes, but at present prices I would prefer shorts.

Q. How about ground wheat for pigs ?

A. This along with other food makes an excellent finishing feed for them.

Q. Would you use rye for hog feed ?

A. It is dangerous for young pigs, but mixed with oats, bran, or shorts, is all right for older ones.

Q. What value has factory whey ?

A. The men who feed hogs in large numbers at the factories, pay from three to four cents per hundred for it. Of course it is worth more than that to them as they have to make a profit out of it. Some authorities say it is worth six to seven cents per hundred. I don't think the average whey that reaches farm pig pens is worth more than four cents per hundred lbs.

Q. What do you think of alfalfa as food for pigs ?

A. A very rich food, giving good results, not only for pigs but all classe of stock.

Q. You say that oil meal is valuable for young pigs, especially when fed with whey. How much would you give young pigs at weaning time, say eight weeks old ?

A. A good handful to a litter of 8 to 10 pigs.

Mr. Whaley, Mount Elgin : I mix 10 pounds of ground oil-cake to 100 pounds of mixed meal. That would be about a day's feed for 100 pigs of from 8 to 12 weeks old. I find it very useful, especially when feding whey.

Q. What are artichokes anyway ?

A. F. C. Elford, Holmesville : They are plants that look something like sunflowers. Their chief feeding value is in the tubers which develop like potatoes.

Q. How do you plant artichokes ?

A. The same as you would potatoes ?

Q. How long will they stay in the ground ?

A. I do not know, perhaps forever.

Q. How do you harvest them ?

A. Let the pigs do it. They take all they can get, and there will still be enough left to re-seed the plot for the next year's crop.

Q. How much can you grow per acre ?

A. From 600 to 2000 bushels.

Q. How do you prepare the land for the next year's crop ?

A. Go over the land in the spring with spring-teeth cultivator, working it down level.

Q. Where can you buy the seed ?

A. From any reliable seedman ?

Q. Do the hogs like the artichoke ?

A. Yes, they are very fond of it and will do well upon it.

ORDINARY DISEASES OF THE STOMACH OF THE OX.

By H. G. Reed, V. S., Georgetown.

As a rule I do not think it wise for a farmer to act as his own veterinary surgeon, but now that the feeding of cattle, both for dairy and beefing purposes is so generally practised through the country, I think every farmer should endeavor to know something of the diseases of the stomach of cattle, so that in case of emergency, he could be able to do something for the animal until professional help could be obtained.

When cattle are highly fed, the stomach has a very hard task to perform, and it is little wonder that it sometimes gets out of order. In order that we may more readily understand the diseases of the stomach, I shall briefly describe the arrangements of the organ and the process of rumination or chewing the cud. The ox is usually said to have a poor stomach, but that is not really the case. The organ is divided into four compartments, which for simplicity we shall call 1st, 2nd, 3rd, and 4th stomachs. The

gullet enters the 1st stomach, or paunch, the capacity of which is very great. The 2nd stomach opens from the first and is sometimes called the honeycomb from the appearance of its surface, then comes the 3rd stomach called manyplies from its resemblance to the leaves of a book. The first three stomachs prepare the food for the fourth, which is the true digestive stomach.

The Process of Digestion: We will now consider the normal or healthy process of digestion. When the food is taken into the stomach, it is but very imperfectly masticated and the greatest portion of it passes into the paunch. Some fluid or very fine portions may pass to the third or fourth stomach. While the food is being chewed in the mouth it is mixed with large quantities of saliva, a fluid thrown out from the salivary glands in the mouth. In the paunch it comes in contact with another digestive fluid secreted from the walls of that organ, and the whole mass is thoroughly mixed by the contracting walls of the stomach. After the animal has finished his meal the process of rumination begins. This act is performed by the contracting of the walls of the paunch forcing the food up against the gullet where an opening is provided, which grasps a portion of the partly digested food and by a regurgitating process is forced back to the mouth, where it is chewed again, much more thoroughly than the first time, and when swallowed the second time passes to the third stomach. Some coarse portions of food may pass to the paunch the second time to be further prepared for digestion. The final prepartion of the food for the true digestive stomach takes place in the third sack, where it is drawn between the leases of folds and reduced to a very fine state before passing to the fourth stomach.

In order that digestion may be properly performed, the muscular coats of the first and second sacks must be active and able to contract upon their contents as they collect If from any cause those coats become inactive and the animal continues to eat, the contents will accumulate, the process of rumination will cease or the animal will have "lost its cud" as it is often expressed.

Now if this food be of a nature that will ferment easily, such as fresh clover, turnip tops, rape, or heavy meal, such as pea or corn meal, then we have a case of bloating shown by an enormous distention of the left side, which presents a more or less drum-like appearance. The animal will show signs of distress such as tramping about in the stall, slobbering at the mouth, tongue protruded, etc. When the above three symptoms are present treatment must be prompt, or fatal results will follow very quickly. In a milder form of bloating, a dose of purgative medicine, 1 or 2 pounds of epsom salts will usually effect a cure, being always careful not to let the animal have any more food until the bowels have been freely moved. In the next severe form of bloating we have to give relief by puncturing the stomach from the outside, a trocar and canula is the proper instrument to use, but as farmers do not usually have one, a knife may be used with safety. Make the opening on the left side about six inches downward from the hip bone. Keep the lips of the wound apart until the gas escapes, the animal will experience immediate relief, and, as a rule, will not be any the worse for the operation. Always follow up with a dose of purgative medicine and give no food until the bowels act freely.

When the stomach becomes over-loaded with food that does not easily ferment, we have what is called impact of the paunch. The stomach is not quite so full looking as in bloating and the same difficulty in breathing is not noticed, rumination ceases, and, as a rule, the patient is constipated. This trouble is usually overcome, if taken on the start, by giving a brisk physic. 1 to 2 pounds of Epsom salts and giving no food until the bowels move freely. Always let the patient have what water he wants in small quantities, and as often as he wants it. Sometimes an animal's stomach becomes so overloaded that medicines have no action whatever and an operation is necessary. An opening is made right into the paunch and the contents removed by the hand, but, of course, none but an expert could perform this operation. Impaction of the third stomach, or manyplies, is called fardel-bound, and consists of an impaction of the food beteween the leaves of the sack. The symptoms of this disease are not alarming, indeed are hardly noticeable for some days. The animal may be a little off her food for a day or two. If a milch cow she will fall off in her milk some and the nose will become dry. If taken in the first stages,

a good purgative dose, and no food for a meal or two, will generally effect a cure, but if allowed to run on for a week or so before treatment is adopted, the result is frequently fatal.

I wish to emphasize what I have said about feeding an animal that is a little off its food. If a well-fed animal does not want its food then take it all away and do not give any more until he does want it and give a dose of purgative medicine.

DISCUSSION.

Q. When a farmer finds a beefing steer a little off his feed, what had we better give him to eat and what treatment, if any, should we adopt ?

A. Give no food of any kind for twenty-four hours and give in a drench two pounds of salts, start him off on scalded bran or roots or some easily digested food.

Q. Why is an over feed of turnip tops or rape likely to kill by bloating ?

A. Because they ferment easily and gases are formed, which cause bloating.

Q. Which is the best for cattle, Epsom or Glauber salts ?

A. Epsom salts, decidedly.

Q. Can an operation be performed for the relief of impaction of the third stomach.

A. No.

Q. After opening with a knife the side of a bloated ox is it necessary to stitch up the wound.

A. No.

Q. After an animal has had one attack of indigestion is he liable to have another.

A. I think not ; but if the attack was due to a weakly digestive system of course he might have another attack because of that, but not because he had had a previous attack.

Q. In choking on an apple is it well to hold a block of wood against the apple and then strike with a mallet and crush the apple ?

Q. No, that would be very dangerous.

Q. I have been told that silage is likely to produce bloating. Is this true ?

A. I do not think so.

Q. Why is an over feed of turnip tops or rape more likely to produce bloating than an over feed of dry fodder?

A. Because green and juicy foods ferment more readily than dry foods.

ment and what ought the steer to get to eat ?

Q. What is the remedy for impaction of the rumen ?

A. T. G. Raynor, Rose Hall : A good strong purgative. For a 1,000 lbs. cow, 2 lbs. Epsom salts, 1 cupful black molasses, 1 tea spoonful salt petre, and table spoonful of ginger.

Q. What do you give for impaction of the third stomach, or manyplies ?

A. I give raw linseed oil, 1½ quarts, or an ounce or so of aloes, and rectal injections of warm water and soap.

Q. Can a cow lose her cud ?

A. Chas. S. Moore, Stanbridge, Que. : No. The cud is the coarse fodder contained in the paunch. When the cow is well she brings this back to the mouth for re-chewing. when she is sick she has no desire to chew the cud.

Q. What is the best remedy for milk fever ?

A. Dr. Henry G. Reed, Georgetown : Prevention. Place the cow on shorter rations. If coming in in summer or fall and the grass is good, place her entirely on pasture. In winter don't give her much milk-producing food before calving. Two weeks before calving give her a pound of salts at a dose, twice a week. A couple of days before calving two pounds would be good. Do not have the stalls with too much slope towards the gutters. Keep her as high behind as at the front. If this were done there would be less trouble with cows putting out their calf bed after calving.

Q. What is the best remedy for bloat in cattle ?

A. If cattle get a large feed of turnip tops, rape, etc., and the animal swells, the chances are you will lose the animal if you wait to send for a veterinary surgeon. In a case of this kind a farmer should not hesitate to stab the animal on the left side in the centre of that three-cornered piece between the sort ribs and the hook bones. You can do it with a jack-knife. Stab through the paunch. Insert a small tube to let the gas escape. A goose quill is too small, but it will let some of the gas out and give relief.

Q. Would it have a tendency to prevent milk fever to milk the cows for a time before calving ?

No, I think no.

Q. Is milk fever likely to affect cows that are on pasture at calving time ?

A. Not so likely, but if the pasture is very good it would be better to remove them to poorer pasture.

Q. I gave a cow with milk fever a pound of salts from a bottle and she was dead in ten minutes. What killed her ?

A. The cow was evidently choked by the liquid running down the wind pipe into the lungs. An animal down with milk fever cannot swallow, because the throat is paralyzed. A stomach tube ought always to be used in giving medicine to a patient down with milk fever.

Q. How long should the afterbirth be left before steps should be taken to have it removed ?

A. Leave it to nature for twenty-four hours.

Q. When there is an obstruction in a cow's teat is it well to allow the calf to suck it ?

A. The calf will not suck such a teat unless almost starving.

Q. Is there any danger of a cow dying suddenly from choking ?

A. Not very much.

Q. If a cow chokes what is the best thing to do ?

A. Work from the outside and try to get the obstruction up or down, or put a horseshoe or clevis in her mouth to keep it open. Put your hand down, but if you cannot reach the obstruction do not use a whip stock or rake handle. Use rather a piece or garden hose. Force a whip stalk down the inside of the hose, being careful not to put it quite to the end. A hose and whip used in this way is a handy substitute for a probang.

THE DAIRY.

IMPROVING GRADE HERDS.

By D. Drummond, Myrtle.

In travelling through the country, we notice that if there is any one branch of agriculture that stnds in need of improvement, it is the live stock branch, and especially cattle. In nine cases out of ten, when looking at a herd of cattle it is impossible to tell what ideal the farmer had in view when breeding them unless it was to produce an animal. The breeds are so mixed that in most cases they are worse than twenty years ago, as they have more variations, but it is now easier to breed up on account of each new cross making the whole more pliable or susceptible to improvements. Is there anything we can say to help the farmer improve the stock he has ? There is always the common answer "Beter feed and better Blood", a good solution of the problem if he knows how to use them to better his stock. These two factors must always go together, but after them comes that great problem of selection, which is in fact the only law of breeding that is entirely under our control. The other laws such as "Like producing like" and "Reversion or Breeding back" are largely behond the farmer's control, but he must use them as much as possible to help him in his selection. We often hear instructions as to how to select animals for their particular functions so that for the present it is necessary only to discuss the question of how to select them for breeding purposes to get the greatest improvement.

There is an old saying among breeders that the best results are generally produced by breeding from a dam that produces offspring like the sire, and I believe that is the fundamental basis from which we can expect to receive the greatest benefit from better blood in the grade herds of this country whether they are dairy or beef.

Test Cows Before Breeding Them. Find out by weighing and testing milk what our cows are doing, then increase the food and give better care and weigh and test again, then you will find the cows that are most susceptible to improvement and that respond most readily to better care.

Use Only The Best Sires. Now comes the time for better blood. Get a bull belonging to some of the recognized pure breeds with a long line of high producing ancestry as possible, and see as many of them as are within reach. Find out if possible if the Dam and the Grand-dam have good shaped udders, for it appears that dairy qualities although entirely a female function are transmitted very largely through the sire. That is why a good sire is so valuable in improving dairy herds. Now we expect our bull is better than our cows as he is pure bred of a deep milking strain, but what use is he if he does not transmit the power he has inherited from his ancestors to do something. If the bull has the power of transmitting the good qualities of his ancestors it does not look as if it made much difference which cow was the dam of the calf we wished to raise. If the bull is better than the cows, it is his qualities we want, if they blend with those of the cows so much the better. The best calf to raise is the one that shows most largely the qualities of the sire. By observing closely we will find that it is generally the calves of the cows which showed the greatest improvement from better food and better care that are best to keep. Those cows are the least liable to transmit their own qualities, they are the most pliable as their characteristics are the least firmly fixed.

Select Heifer Calves. I would raise as many heifer calves as possible with the expectation of discarding many of them when two or three years old, or even before that age if we notice any tendency to revert back to the original scrub. We must not stop as there is no such thing as standing still in stock breeding. We have either to keep on improving or they will go back in spite of us, because the tendency in our domestic animals is always towards deterioration, and we must put forth our best efforts towards improvement. Now what can we do to counteract this tendency toward reverting back ? We can reduce it to a minimum by in-breeding, either by breeding those heifers to their sire or to another that very closely resembles him. When we get past that point we want to breed or blend the qualities of both sire and dam, for now the tendency to reversion to the original will have almost disappeared. This is because the animals become in a few generations to all intents and purposes almost pure bred.

During this time we must never lose sight of the better feed and care as these do a great deal towards improvement of the herd. This is particularly so if the development during early age of the heifers, especially until they have produced their second calf. If then they do not come up to the standard of a good cow discard them.

Q. In building up a herd of dairy cows is it not important to select a certain breed ?

A. T. G. Raynor, Rose Hall : I believe it is. After determining the breed stick to the use of the best pure bred sires of that breed obtainable, but have them carry their pedigrees on their backs.

Q. Is there no middle course in breeding for dairy and beef, and may we not produce an animal doing fairly well in both ?

A. Yes, I believe it is possible, but the best results in either beef or milk are not obtained in the combination animal.

Q. Our cattle are not as large as they were thirty years ago, and do not seem to have the same constitution. What is the cause ?

A. T. H. Mason, Straffordville : Many leading authorities claim that the use of immature sires, which is now the prevailing practice, is the most prominent cause.

Q. Do you think you can produce or raise a good dairy cow from a cross with a shorthorn and one of the dairy breeds ?

A. R. H. Field, Addison : Not the highest type of dairy cow.

CALF FEEDING.

By Duncan C. Anderson, Rugby.

For a number of years, I have had most of my cows drop their calves in the late fall or early winter, and have come to the conclusion that there is a decided gain in so doing. The milking season is lengthened. Cows coming in fresh before Christmas, by liberal feeding in winter, milk nearly as well in the early summer when the pastures are at their best as cows that come in fresh in March. We milk ten months, giving the cows two months rest. They are rested in the early fall when the pastures are at their poorest, at that time the grass is generally dry, parched, and burned up. As we raise on the skim milk a calf to each cow, it is important that the cow should have two months' rest out of the twelve. But when the cows are milked to within a couple of weeks of calving, they get no chance to recuperate. The calf generally comes with a weakened vitality and does not make as rapid or satisfactory a growth in the first six months as when the cow has had a fair period for rest and recuperation.

After a long term of experience, I have come to the conclusion, considering the increased price of winter butter, the long milking season and resting when the grass is poor, that in winter dairying cows give at least twenty-five per cent. more milk in the season, than if they come in fresh in the spring months. Again an early winter or fall calf is as well grown and quite as heavy at two and a half years as a spring calf is at three years old. There is a gain of six months in the age of the calf, the reason being that it is weaned off the milk in June, goes on the grass and if fed a little grain or meal in the fall, it is a good strong lusty yearling and winters much better than a spring calf that is just weaned and goes into winter.

Calf Raising. When a calf is dropped it is not a good practice to allow the cow to lick and fondle her offspring. When the separation does take place there is always a disturbance in the cow stable, and the mother gets excited. Some nervous cows keep so for the best part of a week. Better results ar obtained by removing the new-born calf without allowing the mother to lick it. Rub it dry with a wisp of straw, put it into a roomy, dry, warm pen that is free from frost and draughts and do not give it any milk for the first twelve hours. When a calf is hungry it is not nearly so much trouble to teach it to drink. For the first two weeks it should have a quart of whole milk three timee a day, care being taken that the noon milk is warmed to new milk heat. For the next three weeks half a quart of skim milk should be added to the whole milk at each meal. When the calf gets to be five weeks old, take off the noon milk, also the whole milk, giving about three quarts of skim milk twice each day. By this time the stomach will be strong enough to assimilate and digest other food. The noon meal should be pulped roots, chopped oats and well-saved clover hay. If a separator is not used and milk is set in shallow pans or deep setting cans, it should always be warmed up to new milk heat before being fed. If fed cold or too hot it is apt to produce bloating and scours. When, through careless feeding, scouring is allowed to become chronic there is no remedy. When a calf is not doing well, break an egg into its milk ; it acts as a tonic and adds strength to the ration.

To supplement the loss of butter-fat in milk, take for twelve calves over two months of age four cups of flax seed. Put it into a common stove-pot and fill it with water. Do this after dinner, and allow it to simmer all afternoon and evening. Next morning boil smartly for about half an hour and stir in some wheat flour until it gets about the consistency of thin porridge. A calf three months old will take a cup full of this flax seed porridge in its skim milk. The flour is used to counteract the loosening effects of the flax seed. Care must be used at first not to overfeed, but one should work up gradually to what I have mentioned, with skim milk, flaxseed tea, roots, chopped oats and clover hay. Calves should always have comfortable, warm pens, kept clean and well bedded. Calves can be raised much more profitably in winter than in summer. Where a separator is used, it is best to skim the froth off the skim milk, and not feed it to the young calves.

especially those that are under three months. It has a tendency to disturb the normal action of the stomach and set up scours. Whenever a calf is scouring reduce the quantity of milk. Be careful to have the pails that the calves are fed from as clean as the milking pails. With skim milk fed at the right temperature, fed out of clean pails in not too large quantities and fed regularly, there will be very little trouble from calves scouring.

Summer Feeding. In warm weather calves should be kept in during the day time and turned out during the evening so as to avoid the hot sun and the flies. Whole or chopped oats should be fed, or a mixture of whole and chopped oats. About a cupful twice a day for an ordinary sized calf, that is on good pasture will be sufficient. For fall feeding until the roots are harvested, there is nothing equal to green corn run through the cutting box and mixed with some chopped oats.

The main point in calf feeding is never allow them to stop growing, and for beef animals keep them in good flesh. In feeding calves, as in every system of feeding, the extremes of over and under feeding are to be avoided. Continuous, regular liberal feeding always brings the most profit and the best practical results.

DISCUSSION.

Q. What do you feed young calves as a substitute for butter-fat when you raise them on skim milk, and can you raise good calves in that way ?

A. G. C. Caston, Craighurst : There is nothing that I know of so good as ground flaxseed. I have raised splendid calves that way. I begin to add skim milk when they are two weeks old, gradually reducing the quantity of new milk. But as soon as I begin to dilute with skim milk I add a little flaxseed meal. I scald the meal so that it makes a jelly, adding more meal as the quantity of skim milk is increased. When four weeks old they are on skim milk and meal.

Q. What is your opinion about cows calving in the fall ?

A. Duncan Anderson, Rugby : It is a serious mistake to have all our cows calve in the spring. Cows coming in in the fall give during the milking season a larger supply of milk than those coming in the spring. Calves that come in the fall make a greater growth. From experience I have come to the conclusion that a calf coming in the fall is as well grown and quite as heavy at two and a half years old as a spring calf will be at three years old. By having the calves come in the fall we gain six months in the life of the calf. The calf is weaned when the grass is at its best. Feed a little meal twice a day along with the grass. In the hot weather keep them in during the day time.

Q. Would you boil linseed meal for calves ?

A. Chas. S. Moore, Stanbridge, Que : Linseed meal is said to give better results if cooked. I have, however, had good results from feeding it raw, with shorts or middlings.

Q. How much linseed would you give a calf ?

A. Start with a teaspoonful at a feed, and gradually increase until the calf is receiving a tablespoonful.

Q. Which is the better food for young calves, whole or skim milk ?

A. If you are raising the calf for dairy purposes I would prefer giving her the skim milk after she is two or three weeks old. The idea in raising a calf for a milch cow is to keep her thrifty and growing, but not fat.

Q. In feeding a calf to raise for a dairy cow will it influence it as such to feed it on whole milk instead of skim milk ?

A. R. H. Field, Addison : It will be much more expensive and will make no better cow.

Q. Is separator skim milk good for calves ?

A. F. J. Sleightholm, Strathroy : Yes. It is the basis of the best calf-feeding when wisely fed.

Q. How should it be fed ?

A. To very young calves, feed three times daily in small quantities, at blood heat or thereabouts. Always feed it at the same temperature and at the same time. Supplement by ground and boiled flaxseed, or by ground or whole oats, with a little bran.

Q. Are you prepared to say that it will not kill the calves ?

A. Yes; if rightly fed.

Q. Is it equal to skim milk from shallow pan or deep can methods ?

A. Speaking generally I would say yes, and as a rule it is better on acocunt of its sweetness and uniformity in character.

HELPING THE DAIRY INDUSTRY.

Reported by the Superintendent.

The Farmers' Institutes of the Province of Ontario have now a total membership of over 20,000 persons. Every settled township in the Province is represented and every county holds a series of meetings each year. Up to this time these meetings have been of a general character, but it is our opinion that the time has now come for specialization. fruit meetings in fruit sections and dairy meetings in dairy divisions. Such subjects as cultivation of the soil, growng of corn, conservation of moisture, destruction of weeds and such topics as all farmers are interested in will continue to be discussed more or less at all Institute meetings.

We have achieved remarkable success with our dairy products on the markets of the Old World. This has assured our dairymen a good price the year round for their products and has induced many general farmers to make a specialty of the dairy business. It is therefore with the hope that we may be able to help in some measure those who are producing the milk, that we have during the past few weeks been holding special dairy meetings for farmers. As reported in these columns recently, meetings were held all the way from Aylmer, Elgin County, to Stirling in Hastings, and from reports received these meetings, without exception, were appreciated as shown by the large attendance.

In the Western part of the province the Institutes were represented by Mr. A. Elliott, of Galt, and in the East by Mr. Henry Glendinning, of Manilla. These gentlemen were also assisted by practical men who understand the manufacture of butter and cheese so that no question arose in reference to the production, care, handling or manufacture of milk but what some member of the delegation was able to throw light on the subject.

Ontario county has been noted for its fine farms, good farmers and splendid live stock. It has never been considered much of a dairy county. The reason for this is that the county is a very long one from north to south and the condition of the soil and water differ materially in different parts.

South Ontario has long been noted as a Shorthorn district, and it is seldom that the sale of Shorthorn cattle occurs anywhere in this province without some of them having come from the neighborhood of Whitby, Columbus, Brooklin, Greenwood, or Myrtle. Even at the Provincial Sale held in March so far east as Ottawa, forty-nine out of sixty-five animals offered for sale came from the southern part of this county.

North Ontario is not so. Here the county is more broken, large tracts of good pasture land, plenty of fresh water lakes and streams, so that the people naturally take to the dairy industry. In this regard we would like to say that probably that no man has done more to help this particular branch of the work than Mr. Joseph E. Gould, of Uxbridge. In fact it is generally conceded that no man has done so much to spread the gospel of corn and ensilage throughout the entire Province as this same Joe. Gould.

Mr. Henry Glendinning who clearly proved the fallacy of the old saying that a "prophet is not without honor except in his own country" discussed the subject of the "Dairy Cow and How to Feed Her". Being within five miles of his own home Mr. Glendinning thoroughly understood the conditions under which the farmers were labouring.

"I have," said Mr Glendinning, "had the privilege in connection with Farmers' Institute work of driving over a large part of Ontario. In no part of the province have I found on the average, better soil, beter natural drainage, or a better class of farm buildings than we have here. Down in Leeds, where Mr. Derbyshire comes from, the land is not nearly equal to ours. Not over 85 per cent. of the land down there is tillable, the rest being broken with rocks. And yet land there will sell for $20 an acre more than it will here. Why ?

"The answer is simple. While we were still growing grain for sale the people of the East had turned their attention to dairying. While we were impoverishing our land and ourselves by selling oats at 14c to 24c a bushel and wheat at about 60c, they were enriching their farms and making profit for themselves by selling their product in the form of cheese in the Old Country market."

"That is right," put in Dan Derbyshire, who, in his capacity of president of the Eastern Dairymen's Association, was in the chair ; "that is right. With our poorer soil our former were making double the income that yours were."

"But," continued Mr. Glendinning, "we are doing better now. We are feeding more on our land than formerly. We shall not, however, reach our full measure of development until we absolutely cease hauling grain to the local warehouses for sale.

"Our development in feeding, has been mainly in the direction of fat cattle. In this respect we lead the Province, as is shown by our victories at the Winter Fair and the position taken at the recent sale of pure-bred stock at Guelph. But there is more money in dairying that in beef cattle even."

"That's a fact." Mr. Derbyshire interjected again. "In Leeds and Grenville we make more out of our bacon—a side line to dairying—than you do out of your beef cattle and we have our butter and cheese to the good."

Then, dealing in a general way with the cow part of it, Mr. Glendinning made these points : .....

We have our heifers come in at two years, and we keep them milking for twelve months straight.That fixes the milking habit so that they never get over it. We breed them so that their second calf will come fourteen months after the first, thus allowing them to go dry for two months between the first and second calves. June is the worst possible month in the year to have a cow come in.

Water is, perhaps, the most important element in dairying. This will be more clearly understood when it is stated that 80 per cent. of the blood of the animal is water, that 50 per cent. of the whole body is water, and that of the milk 87 per cent. is water.

See, then, that your cows have all they can drink ; and, to ensure drinking freely, let each animal have her own allowance of salt. Do not give the animals their salt in common. They will not use it so freely in that way.

You get a faint idea of what cows will drink when you hand-pump a coal oil barrel cut in half full of water and find a couple of cows empty it before you know where you are. You are glad when the last cow has left the drinking-place. Is it surprising, when the pumping is left to a boy or a hired man, that the cows sometimes go thirsty ? The only way in which animals can be assured a full supply is by having water always before them so that they may help themselves at will.

Cows never give as freely of milk as when on clover or grass. That is largely because of the succulence. You get the same feding vaule in well-cured clover, but you do not get the succulence. You can supply the succulence in winter by the use of silage and the ration will be properly balanced by the addition of clover hay and bran. By this mixture you get succulence, balance and bulk—all these being essentials to successful feeding.

It is a mistake to feed a small ration. A certain amount of food is used up in keeping the cow alive. It is on what you get the cow to assimilate over and above what is required for maintenance that you get your profit in the milk-pail.

DISCUSSION.

After Mr. Glendinning was through, the usual questioning period followed, the answers to these questions being partly given in the meeting and partly in interviews

R. C. Brandon: You feed your calves skim milk and flaxseed—the latter taking the place of the fat in whole milk. How much flaxseed do you use per calf?

Mr. Glendinning: About one handful per calf—ground and boiled.

D. Annis, Woodville: You have water before your cows all the time. Does not that cause a development of injurious bacteria in the stagnant water?

Mr. Glendinning: Not necessarily. With an automatic drinking trough, by means of which fresh water comes in automatically as the cow empties the trough by drinking, a fresh supply is introduced five or six times a day. Thus the water never becomes either stagnant or warm, and bacteria will not develop at sixty degrees or less. In my case I have a trough the whole length of the stalls; the cows lift the covers when they want to drink and the trough is cleared periodically by flushing through a waste pipe at the end.

Mr. Brandon: There would be a danger where the water was not changed frequently.

Mr. Annis: You say wheat is not a balanced ration, and that the valuable food for cattle in the grain is in the shorts and bran. Would it pay us to sell wheat at sixty-five cents per bushel and buy shorts at ninety cents per hundred weight?

Mr. Glendinning: I believe it would. You sell at over a cent a pound and buy at 9-10 of a cent. Wolff figures that when wheat has a feeding value of $21.97 per ton, bran is worth $18.97, and shorts $21.80. The shorts are thus practically even to wheat in feeding value; they cost less than wheat and they help to balance up a ration with ensilage, while wheat will not. Besides, while a ton of wheat contains less than $8 worth of fertilizing material, a ton of bran has some $12 worth, and shorts somewhere about the same. Of course, this is on the assumption that the wheat is full weight. If it is not full weight, you cannot get 65 cents for it, and, on the other hand, shrunken grain contains, Professor Henry says, pound for pound, more feeding value than does full-weight wheat, because there is in it a greater proportion of protein. The question of distance of haul in exchanging wheat for shorts also comes into account in all this.

Mr. Annis: How can you use chaff?

Mr. Glendinning: It can be mixed with the ensilage. William Rennie, when farm superintendent at the O. A. C., mixed his feed—ensilage, cut clover, chaff, and pulped roots—the day before using. The different feeds were put in one heap, layer on layer, and the heating and steaming made them all practically one, and everything was cleaned up.

Mr. Brandon raised the turnip question, and Mr. Derbyshire gave the reply.

"If," said the latter, "you feed but 15 or 20 pounds of turnips, and give these directly after the morning milking, and then sweep your stable thoroughly so that no foulness is left, you may avoid bad flavors in the milk. But even then there is danger that the butter will, if held, develop a bad flavor."

"Besides," added Mr. Annis, "why risk it? You can raise more mangels to the acre than you can of turnips, and there is no risk with the former."

"You can," added Mr. Derbyshire, "do still better with corn. Seven years ago a man, who had been raising grain as his money crop, on a farm within five miles of Brockville, was starved off the place. He was succeeded by a man who followed a wholly different method. The latter broke up an old sod in a field that had been in pasture fifteen or twenty years, and on that he planted corn. He harrowed the land with a harrow, with the teeth sloping backwards, until the corn was as high as my hand. Then he started the scuffler, and he kept the old gray mare going with that until the crop was too high to allow of further cultivation. That corn grew until beyond my reach, and I can reach fairly high; it had cobs as long as my forearm, and when we weighed the crop on a rod square it showed a yield of over thirty tons to the acre. That man has

followed the same system ever since, and last year from less than 100 acres, he sold over $2,000 worth of milk and hogs."

Mr. L. A. Zufelt, of Kingston Dairy School, showed, in a striking way, how much we may reasonably hope to gain by the improvement in our dairy product that should follow as a result of carrying instruction to the man behind the cow.

"We are," said he, "annually exporting about seventeen and a half million dollars worth of cheese to the Old Country. The great bulk of that cheese sells on an average at three cents below the best home-made English cheese. Some few of our select cheese sell up with the best English. That shows that we can produce as good an article as is produced in England. Now, if all our cheese is, by means of educating the milk producers and makers, brought up to the English level, that will mean increasing the value of this product by twenty-five per cent. That would add over four and a quarter millions to the value of our exports of cheese without the increase of a pound in the output. Even if but two per cent. were added to the value, that would figue up to $350,000 a year."

But Mr. Zufelt did not confine himself to cheese. He referred also to butter. "In butter" said he, "there is an even greater loss than in the case of cheese. This is because in butter making the factory system has not yet been generally introduced. Poor home dairy butter is selling to-day at fifteen cents, while choice creamery is going at twenty-three cents. There is a loss of eight cents per lb. That is money absolutely lost. No one is benefited. When money is stolen it is not lost—some one gets it again. But in this case the loss is as complete as if you took so many bills and burned them in the stove.

"But this is not the whole of it. By turning out a poor product we not only reduce the average price, but we check consumption. A pound of poor butter will go further than two pounds of good. Every pound that is not good reduces consumption to that extent, and thus lessens the market for that which we are producing."

Then dealing more with matters of detail relating to the dairy industry, Mr. Zufelt made these points :

Cleanliness is the keystone of success. The cow should be brushed clean before milking; the milker should have clean hands; he should be dresed in clean clothes, and the cow should be milked in a place where there is no dust or dirt. Dust, laden as it is with bacteria, is one of the greatest enemies we have to guard against.

After the milk has been drawn from the cow it should be aerated in a pure atmosphere. Aerating in an impure atmosphere causes injury rather than benefit. Next reduce the milk to a temperature of 60 degrees. Do not mix the morning's milk with that drawn the evening before, unless both are first brought to the same temperature. Better not mix at all.

Cheapness is the curse of the dairy industry. Patrons of factories see the cent they save by squeezing the maker down to the lowest possible limit; they do not see the dollar they lose by inefficiency. It is poor economy to save a quarter of a cent a pound on the cost of making a pound of butter and to lose two cents in the value of the product.

There is not enough of the true spirit of co-operation in this industry. The milk producer thinks his part is done when he delivers his milk at the factory ; the maker, too, often has no interest in the business outside of what he gets for turning his milk into cheese or butter. We should all realize that we are all equally interested in the product until it is finally placed before the consumer in England. Until this fact is realized we shall not attain our proper place in the market of Great Britain.

Let co-operation be shown in another way. Instead of having a wagon call at alternate farms for milk, have it call at every farm on the route. That will cut the cost of hauling nearly in half. Instead of having half or a third of the farmers in the neighborhood of a factory as patrons, have them all as patrons. The more milk you have handled under one roof, the less the cost per hundred weight of handling.

Mr. Zufelt, on concluding, was asked a number of questions :

Is it possible to have the milk taken from cows in such clean condition that straining is unnecessary ?

Yes. The makers of the finest quality of Swiss cheese refuse to allow the milk from which that cheese is made to be strained.

In answer to another question, Mr. Zufelt described the milk stand used in some of the eastern counties. This stand is well away from the buildings. It is on a level with the wagon. The floor is of slats, 1½ x 2 inches, three-quarters of an inch apart. The sides are of lath and the whole is neatly roofed. By this means the dust and rain are excluded, and the cans protected against contamination by dogs or other animals.

DISCUSSION.

Q. Would you wait until oats begin to turn before cutting for cows ?

A. Chas. S. Moore, Stanbridge, Que.: No, they are at their best when in the milk stage. After the straw begins to ripen cows do not relish them.

Q. Do you run your hay through a cutter before feeding it to cows ?

A. No, I feed it uncut.

Q. What do you use to keep off the horn fly ?

A. Cows should be sprayed or rubbed with a brush two or three times a week, with a mixture of equal parts of machine oil, oil of tar, and crude carbolic acid.

Q. Would the smell of that mixture taint the milk ?

A. Yes, if the milk is left to stand in the stable while cooling, but it should never be allowed to remain in the stable after being drawn. Milk in cooling will absorb any flavor that may be in the air.

Q. Do you advise mixing grain with the coarse fodder ?

A. Experiments go to show that cows do equally as well when the grain is fed separately as when it is mixed with coarse fodder.

Q. Have you had any experience in feeding wheat ?

A. No, not to cows. If you feed wheat, remember that it is not half as rich in protein as the bran, for the whole wheat contains the flour, which is a carbonaceous food.

Q. Would you condemn a cow at this time of year (November 30th) that is giving a good quantity of milk and getting fat at the same time ?

A. No. If she gives a good quantity of milk and puts on flesh, so much the better. Most good milkers, however, do not have much tendency to put on fat.

Q. Which is the cheaper feed for cows, bran or oats ?

A. At the present time bran is certainly the cheaper.

Q. Will turnips fed to milch cows affect the milk or butter ?

A. Yes, and as a result it is not safe to feed turnips for a high-class quality of cheese or butter. It is much better and safer to feed mangels to dairy cows.

Q. What proportion of oats would you feed with ensilage ?

A. The amount will depend upon the price of oats, and what other feeds are fed with it. About three pounds, mixed with other grains, may be fed to dairy stock.

Q. How much ensilage should a cow have ?

A. About 45 pounds per day, when giving a full flow of milk.

Q. Would a ration of mangels and clover hay make a balanced ration ?

A. Yes, theoretically, but it would not be a practical scheme, as it would be too much bulky food.

Q. Which is cheaper to feed, at present prices, corn chop or gluten meal ?

A. With corn meal at $25 a ton and gluten meal at $22 a ton, the gluten meal is much cheaper, as it is much richer in protein.

Q. Would gluten meal be cheaper than bran if it were $20 a ton ?

A. Yes.

Q. What value has barley in feeding for milk?

A. Barley is not a good milk-producing food, but may be used in limited quantities to produce heat and fat.

Q. How often should cows be watered on an ensilage diet ?

A. Twice per day anyway.

Q. Do cows lose much from exposure ?

A. Yes, when milking very much, if the weather be raw and cold. They should not be left out too long.

Q. How much salt should a cow have per day ?

A. About two ounces. Some may be given in the food, but I like them to take it at their will.

Q. Does it pay to feed cotton-seed meal at $1.50 per hundred pounds.

A. It may in small quantities. Mr. Clemons prefers oil meal, at the same price.

A. There appears to be much difference of opinion on this point. Many good stockmen who formerly fed three times are now feeding only twice a day.

Q. Does rye as a green food flavor the milk ?

A. When fed alone it does, especially in the advanced stages of its growth.

Q. Could you make a balanced ration from corn, clover and roots ?

A. T. G. Raynor, Rose Hall : Yes, but there would be too much bulk to be consumed for a cow to get the required amount of digestible protein. It would pay better to get some of the protein in a more concentrated form than we find it in the clovers.

Q. What would you add to ensilage in feeding for milk ?

A. Bran, oat-chop, gluten meal and clover hay.

Q. Has gluten meal any effect on the flavor of the milk ?

A. I have never heard of any, when fed in reasonable quantities, of three to five pounds per day.

Q. Will silage affect the teeth of cattle ?

A. I have never heard of any case when feeding good silage.

Q. Is lucerne as good for feeding as common clover ?

A. Yes, it is even better, when properly handled, as it contains a larger percentage of protein.

Q. Will plowing kill lucerne?

A. Yes, if done properly and at the right time. When dry, plow with sharp share two inches deep, and afterwards about four inches deep.

Q. Would you use a bull back on his own progeny ?

A. No, not as a rule. In some cases it is permissable, with good results.

Q. How much pea meal would you feed to a fattening animal ?

A. Not more than two or three pounds per day, and not alone, but mixed with bran or oats and barley.

Q. In growing an animal, which will give the best results, cooked or raw food ?

A. I believe cooked food will, but the advantages to be gained may not always pay for the increased labor and other expenses.

Q. How shall we feed our animals in the summer weather during these dry years ?

A. By growing green crops and soiling them more or less. Grow lots of corn. Put up two silos, one for winter and one for summer. Balance up the silage with bran, oat-chop, or other concentrates.

Q. How long should a cow rest between milking periods ?

A. T. H. Mason, Straffordville : At least six weeks. Two months is better.

Q. What about feeding corn ensilage in summer ?

A. We will have to come to that in time. Of course, it will be necessary to feed some bran, oil meal, gluten meal, or other nitrogenous foods with the corn, to get the best results.

Q. What is the best grain to feed cows for milk ?

A. Andrew Elliott, Galt : That depends on the foundation food. If corn silage or timothy hay, the best grain would be oats, bran, middlings, cotton-seed meal, oil cake, gluten meal or pea-chop. If the foundation food is clargely clover, mix with oats, a little barley, some corn, middlings, rye or peas, depending on the price of each. Always feed a mixed grain ration.

Q. How many pounds of chopped oats and bran would be a proper grain ration for a dairy cow per day ?

A. R. H. Field, Addison: From eight to ten pounds per day.

Q. Can you increase the quality of the milk by a system of feeding?

A. You can influence the flavor, but not the quality, that is, not to any marked extent, except by a long period of feeding, say two or three years. There is a limit, a constitutional limit, and we cannot go beyond the limit of the cow.

Q. Can you improve the condition of the dairy cow's flesh while she is milking heavily?

A. Yes.

Q. How?

A. By feeding grain.

Q. Is there any difference in the feeding value of sugar beets and mangels?

A. I have not been able to find any.

Q. Do you approve of mangels for milch cows?

A. F. J. Sleightholm, Strathroy: Yes, they are excellent food for milch cows.

Q. Would you recommend use of silage to tide over dry summer?

A. Yes. I think, all things considered, silage is one of the cheapest foods for such purposes.

Q. What mixture of grain would you recommend for use to feed green?

A. Oats, tares and peas make a good mixture.

Q. Have you fed green rye (fall sown) in spring?

A. Yes, but it is not suitable as food for milch cows, as it makes very rank butter.

Q. How about green rape?

A. The same may be said of it.

Q. Does silage hurt the teeth of cows by the acid in it?

A. No; not from my experience, nor have I met any person who had found it do so.

Q. Do you find it a good practice to house cows during the day in summer?

A. Yes, if properly attended to. The only drawback to the practice is the lack of sufficient cheap labor. They will surely give more milk than when subjected to the direct rays of the sun and tormented by flies.

Q. Do you feed them in the stable?

A. Yes.

Q. What do you feed them.

A. What I may have; usually green fodder or silage. I think a little bran or a mixture of ground grains a profitable addition.

Q. At what stage may green corn be fed?

A. Not much before the tasseling stage. Before this there is too much water and not enough food stuffs developed in the plant.

Q. Would you cut green corn or feed it whole?

A. Feed it whole as long as the cattle will eat it reasonably clean; then cut it.

HOW TO PRODUCE BETTER MILK.

By G. H. Barr, Special Instructor for Lambton County.

The question of more money to the patrons and a better reputation for our Canadian cheese is, no doubt, an interesting subject to all dairymen.

We have had, up to the present time this season, excellent weather, and other conditions favorable to getting the milk delivered at the cheese factories in good form, the result being a lot of fine June cheese, but these conditions will not continue all through the summer, and in order to have the finest cheese all season, the milk must be delivered at the factory sweet, clean, and of good flavor.

The question is, how is this going to be accomplished? The answer—by simply knowing how to take proper care of the cow and the milk. Cows should not be allowed to drink impure water, from dirty water troughs, stagnant pools or ponds, or soakage from barnyards. They should not receive any rye, rape, or turnips—these things cause

tainted or gassy milk, which is the cause of a very great loss in the manufacture of milk into cheese, and hence a loss to the patron. Sour, or over-ripe milk, is caused by leaving or keeping it at too high a temperature. Milk for cheese-making should never be left at a temperature above 70 degrees. Evening's milk should be cooled to about 65 degrees. If the milk is to be kept from Saturday till Monday, it should be cooled to 60 degrees Saturday night, and kept as near that temperature as possible, without any stirring on Sunday. The cow's udder and flanks must be clean before commencing to milk; wipe them with a damp cloth, and milk with dry hands into a clean, bright tin pails; wooden or galvanized pails should never be used for milk. Strain the milk as soon as it is drawn from the cow, through either two thicknesses of cheesecloth, or a very fine wire stralner, or both, putting the cloth over the wire. Cool the milk by putting the can or pails into cold water. Stirring it with a clean, long-handled dipper will allow the animal odor to pass off, and aid in cooling the milk more rapidly.

Very few patrons realize the great loss they sustain by sending overripe, tainted, and gassy milk to the cheese factory. This kind of milk will take from one to three pounds more to make a pound of cheese than sweet, good-flavored milk.

If at a factory which receives 10,000 lbs. of milk per day, the maker takes in three or four cans of sour, tainted or gassy milk, at the very lowest estimate, it will take one pound more milk to make one pound of cheese than if all the milk had been sweet, clean, and well-flavored. Supposing cheese to be worth 10 cents per pound, the loss to the patrons in this case will be $8. If this is continued every day for 26 days, or one month, the loss is $208.

We are quite safe in making the statement that this loss is sustained in every cheese factory in Ontario during the summer months, June, July and August. The patrons are losing the money, and they can blame no one but themselves, but there is no reason why they should continue to lose. If they take proper care of the milk at the farm, and deliver it in good condition to the factory, this very serious loss can be stopped in a day, and the patrons will have more money, the cheese-maker less trouble, and our Canadian cheese will merit the reputation they should have, "the finest in the world."

DISCUSSION.

Q. Is the aeration of milk beneficial?

A. L. A. Zufelt, Kingston: Yes, if done in an absolutely pure atmosphere; otherwise it is a decided injury, as we are simply exposing the milk to all manner of injurious germs.

Q. How would you treat milk during hot weather?

A. First, observe absolute cleanliness at the time of milking, and care of utensils, then cool the milk rapidly, by means of ice or water, to a temperature of 60 degrees F. Keep the milk in a clean place, free from all objectionable odors, and keep the cans covered.

Q. Would it be safe to feed a small quantity of turnips, if done after milking?

A. The feeding of turnips is a very dangerous practice, and should not be tolerated, even in a small way. If a dozen turnips will flavor the milk, one will do so proportionately.

Q. Should whey be returned home in the milk cans?

A. This is merely a matter of cleanliness. If the whey tanks are kept clean and the cans emptied and properly washed as soon as returned, no bad effects will follow; otherwise it is a source of danger. Likewise where the cans are returned empty and allowed to stand around all day with the milk drying on them, and not washed till just before using, it is equally as bad, and, to my mind, there is little choice between the two systems, as either may be good and either bad. It all depends on cleanliness.

Q. What causes milk to be gassy?

A. This condition of milk is produced by gas-forming germs, which may be introduced in many ways. Road dust, dirty stables, and small particles of manure are the most probable sources.

Q. What effect has gassy milk on cheese ?

A. It injures the flavor and tends towards openness of body and harshness of texture. It also takes more milk to make a pound of cheese.

Q. Is it possible to make a fancy cheese from gassy or otherwise tainted milk ?

A. No; it is utterly impossible to make a strictly fancy cheese out of anything but good, pure, clean-flavored milk. We may make an article which may appear to be fairly good at a certain age, but eventually it is bound to go off in flavor.

Q. Is it possible to detect at the weigh-stand all milk which will have an injurious effect on the quality of the cheese ?

A. No, for some of the very worst flavors which we meet with in cheese come from milk which apparently is of clean flavor.

Q. How then can we locate the source of these bad flavors ?

A. By means of the fermentation test we can develop the predominating flavors of the different lots of milk, and then locate the ones that are causing the trouble.

Q. What is the fermentation test ?

A. It consists of a water-tight box, with a lid, containing glass jars which hold about eight ounces of milk. The milk is warmed up to 100 degrees F. and a small amount of rennet is added to each sample. After the milk has become coagulated the curd is cut into small particles, and the whey gradually removed. The temperature of the curd is maintained at 100 degrees F. until the flavors develop, which usually takes place in from six to ten hours. It is very easy then to locate the samples which are causing trouble.

Q. What is the right temperature at which to churn ?

A. F. J. Sleightholm, Strathroy : That temperature that will give you the butter in nice firm condition, in from twenty to forty minutes. At this time of year (January) probably the temperature will be from 60 degrees to 70 degrees F.

Q. At what temperature would you ripen cream ?

A. About 70 degrees F.

Q. Do you approve of the use of the separator ?

A. Yes. But my having it or not having it is another matter. If I had not right conditions for gravitation setting, or if I had a good outlook for market with private customers, and sufficient help to do the work, then I would think a separator desirable ; otherwise I would prefer to send my milk to the creamery.

Q. If cream gets so thick that it will not move in the churn what then ?

A. Thin it with a little water at about the same temperature as the cream.

Q. Have you heard of a churn that will bring the butter in ten minutes, and more of it ?

A. Yes, almost any churn will bring butter in ten minutes if that were desirable, but the latter part of the claim is foundationless. Let fakirs absolutely alone; such churns are frauds.

Q. What does separator milk lack?

A. Chas. S. Moore, Stanbridge, E. Que.: Simply the fat; the casein, albumen, and sugar are all there. Whey lacks the fat and part of the casein, but still retains some of the albumen and sugar.

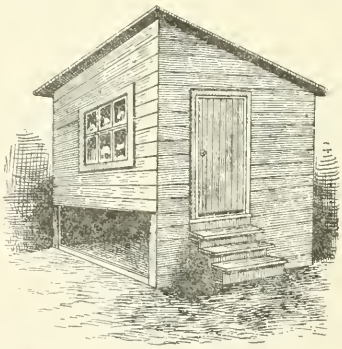
POULTRY.

SUITABLE BREEDS OF POULTRY, AND HOW TO SELECT THEM.

By J. W. Clark, Onondaga.

Since there is a constant and increasing demand for table poultry in the English market, and that the raising of poultry for export here in Canada has developed into quite a prominent industry, which has—the most of us think—come to stay, it will be well for us to watch closely and see that the exacting tastes of the pernickety chicken consumers in England are not hampered with too many vexatious variations.

They want birds that come up to their standard of perfection; something that exactly suits their eye; a heavy, compact body, with white flesh and white legs and skin. It is to our advantage to raise poultry that possess certain good qualities. We must have some eggs for incubation, but that is of secondary consideration. It is to our advantage to get a breed that will stand forcing, and one that will thrive well under even unfavorable climatic conditions such as we frequently get. We want a chicken that will make a rapid growth on comparatively inexpensive food, and reach an early maturity.



A cheap but convenient house for poultry.

Egg-laying machines, such as we have in the Leghorns, Andalusians, and Minorcas, will not suit our purpose. These breeds may be all right in their place, but their place is not in a feeding crate. I have fed some of that type, and believe that I have pumped into them many dollars' worth of feed from which I got no profit.

We hear a great deal about the Buff Orpington breed now. I have only a few of them yet, but I am very much pleased with those which I have, and have ordered a number from England. We cannot speak too highly of the Barred Rock; they are a breed with which all are acquainted, and one that excels in the production of winter eggs. If we take a flock of one hundred well-bred Barred Rocks we are certain of getting eighty or ninety good birds for feeding. Perhaps the one objection to that breed is their tendency towards yellow legs and skin. But this can be overcome to a certain extent by systematically weeding out our breeding stock which shows this tendency, breeding only from white-skinned and white-legged birds, and also by feeding a ration that will make white flesh.

The Wyandottes are also a very good breed. I have no doubt that the fanciers of this particular breed could tell you of many points where they excel the Barred Rocks. From the experience that I have had with them I am not prepared to say that they fit

my needs quite as well. Nevertheless, they are a very excellent fowl, and for crossing with an Indian Game cock are perhaps as good as the best.

The same principles that should be observed in selecting breeding animals of the beef breed should be observed in selecting a cockerel and hens to raise table fowls. It is a block of meat of the best quality that is wanted. You would find it quite as difficult to make a good carcass of chicken out of an egg-laying machine as you would to make an ideal carass of beef with a Jersey steer.

I believe it is wise and essential to the highest degree of success to raise your chicks from hens that are nearly pure bred, and from a pure-bred cock. If your breeding hens have a strain of Leghorn in them, your chickens will not likely be so uniform. There is more apt to be a larger percentage of culls, and some that show the back breeding. I believe that we get stronger chicks by crossing a pure-bred male of one breed with hens of another breed.

An ideal bird for the export trade might be described as having a short neck, with a wide head, bright eyes, and a short, heavy bill. The legs should be short, squarely set, and well apart. The back should be wide and strong. The breast should only be of moderate depth, having plenty of room for a large quantity of meat. The skin, flesh and legs should have a healthy white appearance.

Raising and Fattening Poultry for the English Market.

In selecting and breeding any class of live stock for a definite purpose, the capacity of a breed and also that of individuals of that breed must be considered if our efforts

Low set, vigorous and heavy. A good feeder.

A good breast. Splendid type for fattening.

are to be followed with success. It would be folly on the part of a horse dealer if he were simply attracted by color. He must place more importance on the conformation of the animal, while keeping in view its ability to perform. From the standpoint of a utilitarian, the same principles are true when applied to any class of money-earning live stock. The same principle is quite essential in the raising of poultry for the English market.

The first point to consider in selecting stock to produce table poultry is, that they shall be hardy, that they shall carry a large quantity of flesh of good quality, and that the birds shall present a symmetrical, compact appearance, with the flesh laid on in the

proper places. Perhaps it is not of less importance that the breed used should be a rapid grower, and one that will mature early. For the English market it is highly important that we shall use a breed or strains of a breed which possess a light-colored skin and flesh. When we are catering to the English market we are catering to a class of people who are willing to pay fancy prices for such articles of food as suit their tastes, and we will be well repaid for bending to their desires.

In selecting birds from which to breed, I select blocky ones, having a good width across the shoulders, with short, high-colored legs, and only a fair depth. I always try to avoid breeding from birds which are long in the neck and legs, and which are exceedingly deep in the breast. Birds of that type are quite as difficult to fatten as a long-legged, raw-boned steer. Other points which count in favor of the bird are, a small comb, a bright eye, and a short, heavy bill, showing considerable width where it is joined to the head. These points denote activity, and strong constitutional powers, which are quite essential when we come to forcing in the crates or with a cramming machine. I do not favor the heavy feathered class of poultry. My experience has been that Brahmas, Cochins, and Langshans are not as profitable as other breeds. I do not care to waste feed in the production of feathers. They are also considerably more difficult to pluck, and I consider them to be coarser in flesh than some of the other breeds.

I am a firm believer in cross-breeding for table poultry. As with other stock, I find that birds which have been in-bred, or even line-bred, for a number of years, become less hardy. A large percentage of the eggs are infertile, and when hatched the chickens are more delicate. By introducing new blood from time to time this difficulty can largely be overcome. I like an Indian Game and Barred Rock or Wyandotte cross. A Barred Rock and Wyandotte cross also gives very good results. I have used an Indian Game cockerel with the heavy-feathered Asiatic hens, with fairly good results. I have specially mentioned the Indian Game, because I believe them to be especially well suited to crossing with other breeds. They are a light-feathered, plump-breasted, vigorous bird, and have extra fine flesh.

Any person raising a large number of chicks cannot afford to be without an incubator. But in getting an incubator a person should be careful to select a thoroughly reliable machine. When producing eggs for incubating, I select suitable hens for mating. I use a cock or cockerel with not more than twenty hens. To get good, strong chicks the flock should have abundant exercise, grain gration, a supply of green bone meal, a little chop, and very little soft food. After my chicks are out I do not feed them for twenty-four hours. Nature provides for this time. About the first thing they require is a little grit, such as a little coarse sand, mixed with their food. Their first meal usually consists of a few hard-boiled eggs, chopped fine, with a little granulated oatmeal, which I feed dry. I always avoid sloppy feed during the first week, because it is apt to cause diarrhoea—a very common trouble among little chicks. When a week or ten days old I induce them to exercise by scattering small wheat or a little millet seed among chaff, sawdust, or such like material. A liberal supply of green bone meal and cooked meat will force growth and hasten maturity. Too much care cannot be given in avoiding lice. By using an incubator this trouble is very much lessened.

At from four to five months old I crate for fattening. Before placing in crates I dust them with sulphur and insect powder and grease their legs to keep them smooth and bright. I arrange the crates so that each bird will have access to pure water and coal cinders made from soft coal. My experience has been that coal cinders from soft coal do very well for grit. If any charcoal remains it serves to aid digestion. I feed largely on meal which is a by-product in the manufacturing of rolled oats. This I mix with equal parts of buckwheat chopped, and skim milk. Care must be taken for the first few days, or the birds will go off feed on account of the change to which they have not been accustomed. During the first two weeks I feed three times a day, always being careful not to allow sour feed to remain in the trough. There will be little danger of them becoming "stalled" if care is taken to keep pure water and grit always before them, and sour feed is not left in the trough.

I have been accustomed to using the crammer after the second or third week. I consider that by cramming I can put a finish on birds that cannot be reached in any other way. I use oatmeal—sifted oat chop will do—mixed with skim milk, and add about one pound of tallow twice per week to every sixty or seventy birds. They should be killed and dressed after being crammed ten days or two weeks. I always starve them for thirty-six hours before killing; break the neck close to the head and commence plucking at once. After plucking I place on a shaping board and put weights on them, thus forcing them into a compact appearance.

The Buff Orpington as a General Utility Fowl.

The Buff Orpington fowl, though of comparatively recent introduction, has attained a position in the English show pens which would indicate that it is likely to continue to be a general favorite as an all round utility bird. It possesses a combination of the desirable characteristics of three distinct English breeds.

The object of William Cook, of Orpington House, England, who is the originator of the breed, was to produce a distinct type or strain of birds that would combine the good qualities of some of the breeds that are well known to be good egg-producers and table fowls. In this he was most successful, as to-day the Buff Orpington is generally acknowledged to be the best general-purpose bird in England. They are especially suited to the requirements of the English markets, and, as a money-earning breed, they lead all others.

Being connected with a company that has from time to time been forwarding poultry to the English market, I have had occasion to communicate with some of the leading dealers in dressed poultry in Great Britain, and have noted that special mention has frequently been made of the merits of this breed. They find the greatest demand for a white-fleshed bird having white legs, and which will weigh from three to four pounds dressed when five months old. The color of the flesh or legs will frequently make a difference of one or two cents a pound. Such points do not generally appeal to Canadian poultry raisers, but if we intend to continue to build up a trade in high-class dressed poultry with John Bull we must place before him just what suits his eye, while constantly remembering that, however much he may love us, pure sentiment will not induce him to violate his stomach. Our attention has repeatedly been called to the ideal type of bird for the export trade. We have been supplying too great a mixture, and unless we can succeed in improving our stock, with a view to curtailing those vexatious variations, and supply what the English market demands, we cannot expect to get the highest prices.

During the last three months I have visited the poultry departments at the Ontario Agricultural College, Guelph, and at the Central Experimental Farm, Ottawa, and found that the Buff Orpingtons were making an excellent record as winter layers. W. R. Graham, Superintendent, Poultry Department, Guelph, had a pen which were all laying on 15th January. An April pullet usually commences to lay in October or November, and with proper care will continue to produce eggs throughout the winter and spring.

Comments from some Exporters on Dressed Poultry.

Dr. Boultbee, Manager Canadian Produce Co., Toronto, says: "The Buff Orpington is worth all the other breeds put together for the export trade."

Jas. Ruddin, Game Merchant, Liverpool, says: "For the English trade in dressed poultry the Buff Orpington is the best breed."

C. F. Hodges, Manager Farmers' Packing Co., Brantford, says: "From our experience in shipping dressed poultry to Great Britain, and from what we have seen of this breed, we can with confidence recommend our farmers to get into the way of raising Buff Orpingtons as quickly as possible, as it will greatly help our export trade."

Mr. Courtnay, of the firm of J. & W. J. Courtnay, London, England, says: "The Buff Orpington meets with greater favor in the markets of England than any other class of poultry."

They are exceptionally hardy. During the past winter I have imported four crates

of birds, which I purchased from one of the best flocks of Buff Orpingtons in England, at a cost of $50 per trio. They landed in the early part of March in the very best of condition, after being confined in the crates for seventeen days, and crossing the Atlantic in the roughest part of the year. They were healthy and bright, a number of the pullets were laying, and they have never required nursing a single day since they landed.

Their general characteristics may be summed up as follows : They are hardy, quite domestic in habit, mature early, are excellent egg-producers, their bodies are of the proper size and conformation, they have a fine-grained flesh, and they are well suited to our Canadian climate.

The Incubator.

Not many years ago we looked on self-binders as being somewhat of a luxury. There was a time when the old reaping machine was not considered as a necessity. The farmers of Ontario have been, and continue to be, hedged about with changing conditions, with which they must keep abreast. A man who does not raise more than an acre of grain would not think of getting a self-binder for his own use. For the same reason a person who does not intend to raise more than a few dozen chicks would not get an incubator. But for a person who intends to make poultry raising a money-earning industry, a prominent feature, or a specialty on his farm, it will be advisable for him to study the problem of production, starting with the egg. He must calculate on how to get the largest number of thrifty chicks at the least cost. I have had some experience with running after setting hens, as well as running after a reaping machine, and have not the slightest intention of returning to either.

A dozen or fifteen hens incubating eggs according to nature's methods will require much more attention and time than a machine that will do the work equally as well, if not a little better. An incubator may be used in the early spring, when we cannot get a biddy—as a clucking hen is sometimes called. An incubator will set whenever and wherever you set it, and is not apt to leave the eggs to take part in a fight. That cannot always be said of a hen. If you have a good machine, and the eggs are spoiled, it is not hard to locate the cause. As is the case with many other things, the cheapest incubator is very often the most expensive in the end.

In selecting eggs for incubation I try to have the lot nearly uniform in size. I discard unusually large eggs, as well as the small ones. In the early spring it is difficult to get fertile eggs. Abundant exercise for the breeding fowls is the one important essential. Whole grain, meat, green bone meal, and plenty of grit are foods which help to increase the vital energy of the germ. It is a mistake to use a cock or cockerel with more than fifteen or twenty hens, and it is a mistake to use a cock at all, except with breeding fowls in the breeding season.

When starting the incubator I always get a supply of the best coal oil, and usually run the machine for one day—or until I have the temperature constantly at 102 degrees F. I commence to turn the eggs on the second day, and continue turning them twice a day, reversing the tray each time I return it to the incubator. I also change the eggs from the outside to the centre of the tray, crowding those in the centre to the outside. This process of turning the eggs twice each day allows them to become properly aired. As the hatch advances, a slightly longer time should be allowed for the eggs to air.

After the eggs have been kept at a temperature of 102 degrees F. to 103 degrees F. for seven days, they should be examined, and the unfertilized and doubtful eggs may be removed. This can be done by enclosing a lamp with pasteboard, leaving a whole the shape of an egg, and by rapidly placing the eggs—one at a time—before the small hole, the unfertile and dead eggs can easily be detected. This work should be done rapidly, in a warm room, that that the eggs will not be long exposed to a low temperature. The unfertile eggs are still perfectly sound and fit for general use. At about the twelfth day I again examine the eggs and discard those which have not had a sufficient strong germ to carry them through. Those which are not alive can very easily be distinguished at this time. I again test the eggs on the seventeenth day, removing all eggs containing

dead chicks. On the eighteenth day I turn the eggs for the last time, allowing about forty minutes for them to air, provided that the room is warm, say up to 85 degrees F. After replacing them in the machine I gradually raise the temperature up to 104 degrees F., and do not open the machine again until the chicks are twenty-four hours old, when I take them out.

Killing chicken for British market.

Proper position to hold chicken while commencing to pluck, wings between knees.

DISCUSSION.

Q. Where do you keep your incubator ?

A. Myron A. Gee, Fisherville : In the house.

Q. Is it not dangerous ?

A. No more than with an ordinary lamp, if good oil is used.

Q. Which is the best brooder ?

A. I make my own brooder. Any one can make a good brooder. Make the heat come up over the backs of your chickens.

Q. Would you put 200 chicks in a brooder ?

A. I would prefer two 100-chick brooders.

Q. What incubators are the best to use ?

A. J. W. Clark, Onondaga: There are many good ones. I have used the Morgan and Safety with good results.

Q. Would you run an incubator without a brooder ?

A. Yes, if I was not anxious to have very early chickens, and a small quantity. You can use the hens as brooders in the spring by taking an egg or so out of the incubator when they are about to hatch, and placing them under what hens you think you will need. If they have just commenced to sit they will mother about thirty chicks each.

Q. What do you do for lice ?

A. Dust with insect powder and sulphur, mixed half and half. A little of this placed under the wings and tail answers well.

Q. Do you think it pays a farmer to fatten his own chickens ?

A. G. R. Cottrell, Milton : Most certainly it does. A farmer loses by selling his chickens at 6 cents per pound, or on an average of 28 cents per pair.

A trio of Buff Orpingtons. A well and favorably known table fowl in the Old Country.

Q. How old should chickens be when placed on the market ?

A. A farmer should never raise any more chickens than he intends to food, and feed well. If his chickens are seven or eight months old before they go on the market, they have then developed a spur, and a chick with a spur will bring about two cents per pound less than birds without the spur. They should be sold at from four and a half to five months old.

Q. How large are your chicks when you sell them?

A. The earlier we get our chicks on the market, the more money we get out of them. Place them in the crates at 3½ to 4 lbs. weight, and sell them at about 5½ or 6 pounds.

Q. What about feeding wheat for fattening ?

A. Would prefer something else. Wheat is pasty when ground.

Q. Is buckwheat good for fattening ?

A. Very good results are obtained.

Q. What about feeding turnips to fowl ?

A. I would feed a few if I had not other roots. But one has to be careful as to the flavor of the egg.

Q. What about feeding broilers?

A. As a general thing, farmers are not in a position to make money out of broilers. That part of the business requires a separate house etc.; but there is plenty of money if in a position to grow them.

Q. Can you fatten turkeys in the same way you fatten chickens ?
A. No, you must not shut your turkeys up. They require exercise.
Q. Do you feed ground bone ?
A. R. McCulloch, Saelgrove : Yes.
Q. Does food have an influence on the color of the flesh ?
A. Yes
Q. How do you feed your birds?
A. J. W. Clark, Onondaga : In crates, with troughs in front.
Q. What size are your crates made ?
A. Six feet long by 20 inches square, with divisions every two feet.
Q. How high from the ground do you put your coops ?
A. That depends on the room I have. If I am short of room I place one on top of

The Cramming Machine as used by J. W. Clark, of Onondago.

another, three deep, with pans to catch droppings between. The first one would be about six inches from floor, and a 4-inch division between each coop for pans. If I have plenty of room I put them up 2½ feet from the ground.

Q. How many birds can you put in the crates?

A. That depends on the size of the birds—from 4 to 6.

Q. What prices are realized in the Old Country ?

A. From 10c to 15c per pound, according to quality.

Q. Have you used the crammer ?

A. Yes. It is a good thing to have if you are going in to feeding largely, but I would not advise any one to invest in one for a few birds.

Q. How long should birds be starved before killing ?

A. From 30 to 36 hours. Birds starved that length of time will pluck much more easily than those starved only 12 hours.

Q. Is bone dust good for hens ?

A. Green bone ground is the best, or granulated bone is better.

Q. Do you buy the green bone ground, or grind it yourself ?

A. I grind it.

Q. Will tallow take the place of ground bone ?

A. Not for laying hens.

Q. What proportion of tallow do you feed when fattening chickens ?

A. Commence with one pound to 60 or 70 birds twice a week, and lessen to about one pound to 50 the second week.

Q. Will exporters take scalded birds, or when their heads are off ?

A. They must be dry plucked and have their heads on. You can freeze a dry-plucked bird, and when it thaws out it will remain fresh looking, where the skin of a scalded one will turn dark.

Q. When we have the poultry, where can we find a market ?

A. The Farmers' Packing Company, of Brantford; James Ruddin, Esplanade street Toronto; and the Canadian Produce Company, of Toronto, are handling large quantities of fowl, and are paying good prices for dressed and live birds. They will forward empty crates to you and pay express charges both ways.

Q. What do you advise feeding young chicks ?

A. Myron A. Gee, Fisherville : First feed, at 36 hours old, stale bread, soaked in sweet milk, squeezed dry and crumbled. After that feed corn meal finely ground, one-third, and wheat bran two-thirds, mixed dry and crumbly, in skim milk.

Q. Do you water them, too ?

A. Keep water before them always. Make a fountain of a salmon can and saucer and keep fresh water in it always. Also have sand within reach.

Q. How often do you feed chickens when young, say during the first ten days ?

A. Five or six times a day. Feed very small quantities, aiming to keep them hungry. This is the critical age. After this they exercise more and can use more food.

Q. At what age should chickens be marketed ?

A. Get rid of surplus early cockerels at earliest possible date. Prices are high and you need room for pullets.

Q. What is best weight ?

A. The earlier the season the lighter the weight called for. A plump, fat, four-pound bird is a favorite for export, and takes well in home markets.

Q. Is there any money in selling chickens ?

A. F. C. Elford, Holmesville : Yes, if they are put up in the proper shape.

Q. What kind of chickens are the best for fattening purposes ?

A. I have found Rocks or Wyandottes as good as any.

Q. What do you feed ?

A. Finely-ground oats and skim-milk mixed.

Q. How long are the crates ?

A. This is the model of one : 6 feet long, 16 inches wide, and 20 inches high.

Q. Can you fatten in a crate cheaper than without one ?

A. It is claimed that chicks can be fattened three or four cents per pound cheaper in a crate than in a box stall, and four or five pounds cheaper than allowing them to run loose.

Q. What are chickens worth per pound, fattened as you describe ?

A. I have been offered 10 cents per pound wholesale at my own station. They bring 12 to 16 cents per pound in the Old Country. These prices, however, are for nothing but the very best quality.

Q. What do you think of cross breeds ?

A. G. R. Cottrell, Milton : I never cross fowls at all.

Q. Why not cross the Plymouth Rock and the Wyandotte ?

A. What is to be gained ? Nothing, because the breeds are so much alike.

Q. Have you ever seen a Rock crossed with a Leghorn ?

A. Yes, but after, when you come to the next cross, you are in trouble.

Q. How many male birds would you require for 80 hens?

A. A farmer with 80 hens should never breed from them all. He is losing money. If he put enough male birds with them he would have to buy five or six, otherwise, if he selected a breeding pen of the best and put one good male with them, he would have better eggs and stronger chicks. He could buy an exceptionally good bird for what six half-breeds would cost.

Q. Does it make any difference as to the age of the breeding stock ?

A. I always like matured stock. The chicks are stronger.

Q. Do you prefer a pure-bred fowl ?

A. J. W. Clark, Onondaga : Most decidedly, if you get the proper conformation.

Q. What breeds answer this purpose best ?

A. The American class of Wyandottes and Rocks are fine birds, but we are having a new breed introduced called the Buff Oripington, an English-bred fowl, that answers this purpose better than any other fowl we have, as they have white legs and white flesh, which our English friends ask for.

Q. Are they a general purpose fowl, and white size ?

A. They seem to be extra good winter layers. I have seven which are laying well, and I like them so much that I have ordered a dozen from England. Mr. Graham, of the O. A. C., has the same number of hens, and every one is laying now (January). They are fully as large as the Rock, and lay a large brown egg.

Q. What do you think of crossing ?

A. The first cross will give good results. A cross of the Rock or Wyandotte with the Indian Game makes a fine, full-breasted bird. The game is strong in constitution and light feathered.

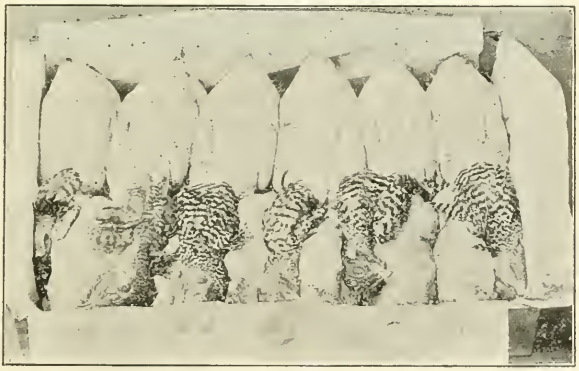
POULTRY POINTERS.

By G. R. Cottrell, Milton.

"1. There is an unlimited market, both at home and abroad, for first-class poultry."

"2. A better class of poultry than at present offered for sale would greatly increase the consumption."

"3. Quality must be improved if we expect higher prices."



Packed for shipment to the British market. (Showing box from upper side.

These three headings were the points from which Mr. Cottrell preached a poultry sermon at Strathroy Dairy School last week. In dealing with the first point, Mr. Cottrell took occasion to say that there was a good market right at home for first-class poultry. In the city of Toronto, for instance, the market is glutted each week with poor, scrawny chickens, selling at from 25 cents to 50 cents per pair, while plump young birds, from 3½ to 5 lbs. each, easily bring from 80 cents to $1.25 per pair.

"I have," said Mr. Cottrell. "no trouble in getting 10 cents per lb. for all the chickens I can raise. Then there is a great demand for poultry in the Old Country markets. At one time this fall Mr. Ruddin, the Liverpool Commission Merchant, had one million chickens in cold storage in Toronto, and there are other firms in that city, as well as in Montreal and other places, who are taking all the chickens they can get for shipment abroad. There is, therefore, no trouble about the market."

In his remarks on the second point, which discussed the question of better chickens increasing the consumption of poultry, Mr. Cottrell said: "As a rule, city and townspeople who can afford to have poultry on their tables two or three times a week, and the wholesale and retail dealers in Toronto tell me that their customers invariably come

Packed for shipment to the British market. (Showing box from underside.)

back after having eaten some birds that have been properly fed. It is the tough, scrawny chickens that spoil the consumption.

"In the third place, we must improve the quality by better methods of breeding and feeding. Many authorities now agree," continued Mr. Cottrell "that the Plymouth Rocks and the Wyandottes are the two best general purpose fowl for the farmer. They can be made to lay when eggs are high priced, and they mature early for the market. Good table fowl should have a broad breast, should be wide between the eyes, good stout legs placed well apart, and good feet. After the chickens are three or four months old they should be put in fattening crates and fed for three or four weeks. This fall I fed three hundred chickens in this way for shipment to the Old Country, for the last three weeks giving them nothing but sifted oatmeal mixed with skim-milk. They had all they could eat three times a day, but as soon as they left off eating the trough was cleaned out and a fresh supply put in next time."

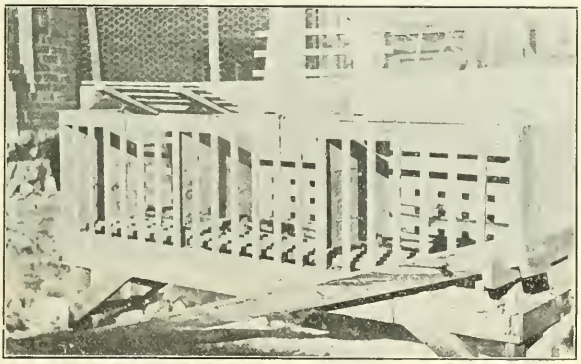
Mr. Cottrell then described the fattening crate, saying: "I make my crate 10 feet long and 16 inches square, slatted on three sides, top, bottom and front. A crate this size will be divided into four compartments, each compartment holding four birds. One trough runs along the entire length of the crate, and the birds put their heads out between the slats and eat the soft food.

"The birds must be dusted with sulphur about once a week to keep off the vermin, and at the end of the second week should have a feed of gravel—about a pail and a half to two hundred birds. This soft, nutritious food makes excellent flesh. The birds not having any exercise, the muscles become tender and juicy, and the fat which is laid on gives them a nice, plump appearance, so that they sell well when taken to market. They should be starved for 36 hours before being killed. This will ensure there being no food in their bodies that might ferment and cause decay in a long ocean trip.

"They should be killed by pulling their necks, if they are to be shipped to the Old Country, or by bleeding in the mouth, piercing the brain, and then letting the blood out back of the neck, for the home market. Old Country people are suspicious about any wound on the body, and even where they are bled in the mouth or head they seem to think that a bird might have been killed 'to save its life.'

"The birds should be plucked dry immediately after they are killed, before the body gets cold, commencing at the breast and working back to the wings and legs. This allows the blood to have drained toward the neck before the feathers are plucked from the extreme parts, and there will be no disfigurement by the blood rushing to fill the holes left where the feathers are taken out.

Egg Production. In answer to a series of questions, Mr. Cottrell then took up the subject of "Egg Production in Winter." "The first thing to be noticed," said Mr. Cottrell, "is the poultry house. Too many farmers expect their chickens to roost in the



A Convenient Feeding Crote.

cow stable, scratch in the manure heap, pick up what grain they can get on the barn floor, and lay eggs every day. If a farmer keeps poultry at all he should keep them for the money he can make out of them, and it will pay every time to have a comfortable house for them, and one that can be ventilated without having a draught immediately on the birds. It is not necessary to have a series of ventilating shafts, but the door and window ought to be arranged so that the roosting places do not come between them. They should be left open part of each day in winter, while the chickens are having a run out, so that the air in the room will become completely changed. If the room is a cold one at night it will materially help to have a drop curtain in front of them, which should be rolled up in the day time.

"Laying hens," continued Mr. Cottrell "must be kept with a good appetite all day long. I feed my laying hens in winter some mangels whole about 9 a. m. At noon I give them some meat, either ground bone or table scraps. If you can get hold of a young calf and boil it, bone and all, it makes excellent food for the chickens. About 4 p.m. I

feed a mash, consisting of one part oat meal, two parts bran, and to every pailful add two handfuls of slacked lime. When mixed I throw in a couple of handfuls of chopped clover hay. After they have eaten this up clean I throw a handful of wheat or corn into the outstraw in the scratching-pen, and let them work away at this until night. Some grit, in the shape of crushed granite or fine gravel, must be kept where the chickens can get at it from time to time, and, of course, fresh water must always be within reach."

Setting Hens. "How do you treat setting hen?" someone asked. "I separate them from all other hens," said Mr. Cottrell, "and put them in a nest apart. After the hen is comfortably settled I leave some solid food—usually in the form of grain—and some water handy to the nest, so that she will not have to stay off long and allow the eggs to get cold. On the seventh day I always examine the eggs. By holding them up to the sun or a candle you can always detect those in which the embryo is forming. You should at once remove all the clear ones, as they will soon spoil, and a bad egg in the nest has an injurious effect on the young germs that are hatching."

Mr. Cottrell went on to say, "The hen should be dusted with sulphur when first put on the nest, and once or twice while hatching. After the chickens are hatched allow them to dry off well before removing from the nest, and take them to a "v" shaped slatted

A lot of Youngsters.

crate, without a bottom, so arranged that the hen cannot get out, but giving the chickens their freedom. Better to have a board or a small platform in front, upon which to feed and after sprinkling some sand on this, which will supply them with grit, they will soon take to eating solid food."

"More chickens are killed," said Mr. Cottrell "by feeding too soon and feeding food that is too heavy on the start, than in any other way. They should be fed very small quantities of stale bread, mixed with sweet milk, and then squeezed out dry.

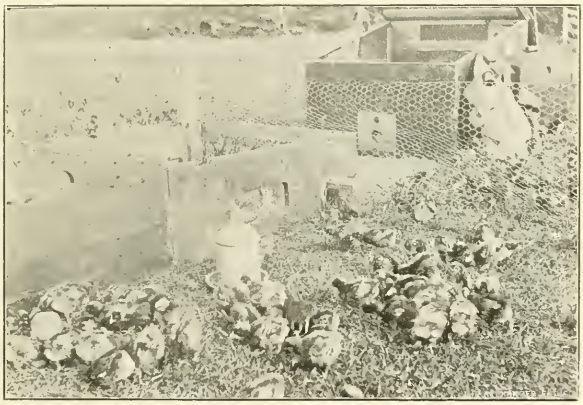
"This should be given three or four times a day, but only in such quantities as will be eaten up clean. At the end of the first week they may be fed small quantities of shorts and corn meal, then gradually they will take solid food, first in form of millet and finally whole wheat. They should, where possible, be given sweet milk to drink from the very first."

"Chickens raised in this way," said Mr. Cottrell, "and then given plenty of food and let run loose, should weigh from 3½ to 4 pounds at four months old. They are then ready for the crates to be finished for the market. If they are allowed to wait until they are six or seven months old they begin to show spurs, and the commission men, on this account, will not pay as much for them. If they are shipped to England they will bring two cents per pound less than if they had been fattened under five months."

In answer to a question, Mr. Cottrell said that potatoes might be fed if cooked first and mixed with a bran mash.

"How many eggs should a hen lay in a year?" was asked. Mr. Cottrell said he expected his hens to average 180 eggs. To do this, however, pullets alone must be kept and they only from hens that have been good layers. "There is a good deal in pedigree," said Mr. Cottrell. "By this I do not mean a pedigree on paper, but the eggs should be set only from the hens that have a good record as egg layers. In this way you can work up a good laying strain from almost any breed."

Mr. Cottrell was kept busy right up until dark answering questions in reference to poultry matters, and it is evident from the interest taken that farmers are beginning to realize the importance of the poultry industry as an adjunct to their business. We know of one lady near Cobourg who makes $400 a year out of her poultry, and there are hundreds of women bringing poultry to market who average from one to two hundred dollars each season.



A Happy Family.

DISCUSSION.

Q. How many hens do you place in one breeding pen?

A. G. R. Cottrell, Milton: Never more than 16, with a male of the American class.

Q. How large a pen do you require for 16 hens?

A. A hen should have eight square feet of floor space to herself, but if they have the barnyard to scratch in, they do not need that much, say six feet.

Q. Do you let your hens out in winter?

A. Certainly, unless it is very cold.

Q. How do you ventilate your hen house?

A. The easiest way is through the doors and windows. Be sure and give them all the fresh air possible.

Q. How high would you build a hen house?

A. Keep it low; probably 9 feet at one side and 4½ at the back.

Q. What kind of a floor would you put in?

A. I would have a clay floor if you can get it dry enough. Build the house large enough so that the hens will not be crowded, and high enough to put about one foot of earth in the bottom, to raise it above the land outside.

Q. What kind of roosts do you use ?

A. Drop boards about two feet from the ground. and roosts about 8 or 10 inches above that.

Q. Do you have any trouble in getting the hens to perch on the roosts, and not on the drop board ?

A. No. Never crowd your hens on the roost. If you place your hand between hens on a crowded roost you will notice how warm it is. If they are crowded they sweat, and when they come off the roost in the mornings they are apt to get cold.

Q. Do you fatten turkeys the same as you do chickens ?

A. No. Turkeys are a wilder nature, and must be given a considerable amount of freedom. I have fattened them by pulping mangels and mixing with oat meal or pea meal and feeding it once a day, and grain the last at night, say peas at night.

Q. How old do you think fowls should be kept ?

A. The American classes should be sold or disposed of at the beginning of the second year.

Q. How do you tell their age ?

A. Always mark by punching the web of the foot, a different foot for pullets and year olds.

Q. Do you think they do better by mixing the food soft for fattening ?

A. That has been my experience.

Q. Would you put hens into crates to fatten them ?

A. Yes.

Q. Do you change your male every year ?

A. Never do any breeding in. If you are keeping pullets you will have, to change the male.

Q. How many males do you run with your fowls ?

A. Not any until breeding season. and then one to sixteen hens.

Q. Do you prefer mica-crystal grit ?

A. Of course gravel will do very well. but a gravel stone is round, and if buying grit, and only buying one kind, I would prefer mica-crystal grit.

Q. Will it do to pen off your hens in one corner of a basement barn ?

A. It would be possible to arrange it satisfactorily for the hens, but what about the rest of the stock ?

Q. Are there not three kinds of lice ?

A. I know of only two, the large hen lice and the small mite. The mite appears different at different times. When full of blood it is red, and at other times it is white.

Q. How old do you keep your hens ?

A. Never after a year old.

Q. What do you do with hens that eat eggs ?

A. Always be sure to have plenty of straw in the bottom of the nests, so that eggs are not apt to get broken. If you have one or two hens that have the habit you had better kill them, but if the flock have it in general, use trap nests, and plenty of china eggs, both in the nests and scattered around the floor.

Q. Is it not a fact that you will get more eggs when the male bird is not in the flock ?

A. I would not say you would get more eggs, but you would get a better egg, and the male would be more use to you when you did want him.

Q. What kind of a roost do you prefer ?

A. A roost three inches square, or two inches square, and planed.

Q. What do you feed your chicks ?

A. I am very decided on the idea that chicks should not be fed too soon after hatching, and the first feed should be grit, then stale bread soaked in sweet milk, and then made as dry as possible or rolled in oat meal.

Q. How soon do you feed the chicks ?

A. Very seldom before they are three days old, with the exception of grit. Mica grit is very good. I always have sand in the bottom of the brooders, and it is remarkable how they eat it.

Q. Do you put anything on top of the sand ?

A. Nothing, only keep it damp.

Q. How often do you clean those brooders out ?

A. About twice a week.

Q. Do you place the food on anything ?

A. Feed right on the sand ?

Q. Do you like milk for little chicks ?

A. I always give them water at the start. Arrange it so that they will not fall into it.

Q. Do you ever feed millet ?

A. Yes, but one must be careful with millet, as it is rather strong food.

Q. How do you like wheat ?

A. Wheat is an excellent food as soon as chicks will eat it.

Q. How often do you feed. For the first few weeks feed as often as you can find it convenient, and then only three times a day. Always feed them all they want, but never leave any lying around. Feed regularly and at the end of 3½ or 4 months you should have them ready to fatten.

Q. Can you hatch chickens too early ?

A. That depends on circumstances. If you have not a suitable place you lessen your profits by hatching too early.

Q. Do the eggs hatch as well in the winter time ?

A. In many cases the eggs are not as fertile.

Q. What is the cause of the early eggs not being so fertile ?

A. This the case when the pens are poorly constructed, and in flocks when no attention is paid to breeding, having a number of half-hearted males with a large flock.

Q. Do you think the Leghorns a good fowl ?

A. They are splendid layers, but not a farmer's fowl.

Q. What are the best farmers' poultry ?

A. Most any of the American varieties. A farmer should select a variety that is extensively bred, so that the breeding stock can be secured cheaply, therefore Plymouth Rocks or Wyandottes are the best.

Q. Are those varieties not apt to get too broody ?

A. You can have strains of the same variety that are entirely different in that respect ; some strains are apt to get too broody, and others not enough.

Q. Do you think late chickens pay ?

A. Not if your pens are such that you cannot keep them warm.

Q. Would you prefer a hen house facing the west to one facing south ?

A. I like west or southwest for house for breeding stock.

Q. How do you know old hens from year olds ?

A. Always punch your hens' feet.

Q. What about feeding mixed grains ?

A. This will do very well. Hens enjoy a change.

Q. Do the Plymouth Rock and Wyandotte hens lay large eggs ?

A. Good-sized eggs, but not the largest.

Q. What breed of fowls lays the largest egg ?

A. Minorcas will lay more weight of eggs in a year, but it is the same as in other things—you can have strains of the same variety that lay different sizes.

Q. What do you do with your old hens ?

A. They are the cheapest meat you can eat.

Q. Do you think it worth while to save the feathers ?

A. Certainly, everything counts. You can get 5 cents per pound for them.

Q. What do you call a poorly-constructed house ? A very cold one ?

A. Not all together. For breeding stock I always prefer a building a little on the cool side to a building too warm. I always like a building for breeding pens dry, well ventilated, with a fair amount of light, and facing the west.

Q. Why do you not give milk to drink ?

A. R. McCulloch, Snellgrove: It is too fattening for egg production.

Q. Is an incubator profitable?

A. Yes, if a large number of chicks are raised.

Q. What is a remedy for lice?

A. Crude carbolic acid.

Q. What causes the great mortality of young chicks?

A. Myron A. Gee, Fisherville: Lice, dampness, and over-feeding. Dust the nest before setting, and on the 18th day dust with insect powder, "Instant Louse Killer, or "Death to Lice."

Q. Do you keep the chicks confined with the hen?

A. No. I always prefer an A-shaped coop, so that the chicks can get out. Put boards to form an enclosure round the coop, allowing seventy-five square feet of space for chicks to run in till they can jump over, then let them range.

Q. Should growing chicks that have free range get any extra feed?

A. Yes, or rather light feed in the morning and all they will eat at night will make them grow faster.

Q. At what age should pullets be accustomed to winter quarters?

A. Latter part of October or fore part of November.

Q. What is the cause of diarrhoea in hens in winter?

A. Lack of grit, indigestion, or liver out of order from too exclusive grain ration, are the general causes.

Q. Give bill of fare for winter feeds for laying hens.

A. Roots, clover chaff, meat in some form, grain and bran, oyster shell, gravel, ater and a keen appetite.

Q. Do you approve of feeding grain in litter?

A. Always let grain be from one-third to half the feed, according to condition and breed of hens.

Q. What are causes for hens not laying better in winter?

A. Cold roosting quarters, over-crowding, exclusive grain ration, no meat supplied.

Q. What is a profitable chicken to keep?

A. A blocky, quick-maturing type. Cockerels are always fat and pullets lay earlier.

Q. Which are the best layers?

A. A good laying strain can be built in any breed if best layers are selected, and this should always be done. The Leghorns are good summer layers, but Rocks and Wyandottes excel in winter time.

Q. What is the best breed of turkeys?

A. G. R. Cottrell, Milton: Bronze turkeys are about the best. Turkeys with a tendency to brown edging on the tail coverts as a rule are larger than those with a clear white edge.

Q. Why do turkeys lay soft-shelled eggs? Is it because they get no grit?

A. That is not always the reason. It seems to be characteristic of turkeys. Care should be taken that the hens do not get too fat.

Q. Would you advise feeding turkeys at all?

A. Feed the male birds well, but the hens very little, if any.

Q. Would you always set hens where they lay?

A. It is better to do so. It is advisable to have hens lay where you want them to set.

Q. But you cannot get them to lay where you want them to?

A. Just before laying time place in the building where you have your turkeys a nest for every hen, and better not have two alike.

Q. What kind of a nest do you prefer?

A. Have it arranged that the hen has not to jump down on the eggs, and that those hatched first cannot leave the nest until all are hatched, thereby causing the hen to leave also. I always like the nest a little flat, not too rounding, so that the eggs will not roll too much together.

Q. What kind or age of stock do you prefer to breed from?

A. Young hens, weighing 15 to 18 pounds, are the best layers, and make better mothers. One male with ten to twelve hens is a good mating.

Q. How many eggs do you give a turkey hen ?

A. As many as she can conveniently cover. Always give a hen her own eggs, and then if you mark the young when they come out, you can tell in the fall how a certain one is bred.

Q. Are young turkeys hard to raise ?

A. They are till after they get their red wattles ; after that they are quite hardy and need very little feed till fall.

GENERAL.

AGRICULTURE IN PUBLIC SCHOOLS.

By G. K. Mills, B.A., Collingwood.

Many present here to-night wonder by what right, I a principal of a collegiate institute, presume to address a Farmers' Institute and perhaps to offer advice on some points. As evidence that I have been in the past, and am now, in a position to become acquainted with the conditions surrounding the subject on which I am about to speak, I may say that I was born and reared on a farm. I have worked at home on the farm, I have worked on other people's farms, and I have worked my own farm. Further, I have taught in an ungraded country school, as principal in a village school, and as assistant in both high school and city collegiate institute. Having thus, as it were, served my apprenticeship under all the conditions necessary to a knowledge of what is needed and what can be done for agriculture in the public school. I hope you will bear with me while I present to you what I think could be done, and should be done, in the matter.

While we as Canadians are concerned regarding the prosperity of Canada as a whole, it is with that particular Province in which we live that we are more particularly interested, but since the products and natural resources of our Dominion resemble so closely those of our Province, I think I may safely say that the methods of education that are beneficial to this Province will prove beneficial to the Dominion at large.

If we consider our country for a moment, we will see a young country, peopled by the descendants of the best nations of Europe, nations that in the past proved themselves first in the arts of peace and war, nations that, no matter to which we trace origin, whether British, French or German, we have every reason to feel a pride in, and no cause to feel ashamed. We will also see a young country rich in natural resources, among the wealthiest countries in the world in her resources of mine, forest, field and fisheries, all awaiting the intelligence, energy and enterprise of our rising generations to become properly developed.

Having, therefore, the blood of the best people of the world in our veins, and living in a country of enormous natural resources, what should be our aim in educational affairs ? Are the educational ideals of the older and wealthier nations of Europe suited to our need ? Is this traditional classical education of England what we require ? I think not. Each nation must educate itself in its own way and for it own ends, and it seems to me that we require such a system of education and training, as will enable our young men who are poor in money, but rich in brain and muscle, to give of their best in the effort to develop the natural resources of our country. I have no objection to a classical education, but it is rather for those who have the inclination, money, and leisure to pursue it, and I question strongly the wisdom of making it compulsory for all our young teachers and matriculants. Classical education will take care of itself, and professional education we need not greatly concern ourselves about. Although this is essentially an agricultural country, the vast majority of our schools have been in the past, and are now, preparatory schools for professional life, and insufficient attention

has been given to the proper training of that vast proportion of our children who leave our country schools in early life, to follow the occupation of their parents on the farm, or, becoming tired or dissatisfied with this, to drift into our large centres, there to earn their living as best they can.

In the past few years we have seen a desire on the part of the Government to give more attention to the needs of the commercial classes by establishing a commercial course in our high schools, and to the manufacturing classes by giving aid to technical schools and manual training classes, but for that great body of our people who are, without doubt, the bone and sinew of our country, little has been done as compared with what could have been done. It is not my business, nor have I a wish to criticize the Government, as their legislation is usually as far in advance of public opinion as it is wise to go. I am well aware that for the past quarter of a century fitful attempts have been made to teach agriculture in our public schools by means of a text book, and by means of teachers wholly unprepared by knowledge or training to make even a moderate success of it, but this verbal teaching of agriculture did not amount to anything in the past, nor will it amount to anything in the future, if not supported by practical application. I also know that agriculture is a science or has its roots embedded in many of the sciences, and a man cannot be supposed to have a profound knowledge of these before he can become a successful farmer. It is not required of him that he shall, but if he has become a successful farmer he must have acquired very many of the underlying principles of these sciences, whether he did so because of his early training in schools, or as a result of bitter experience when he grew older.

Those men who have been the most successful are the very people who most regret that in their younger days they did not recieve some guidance and training, so that they might have, because of a knowledge of some simple underlying principles, escaped the expensive consequences of their later mistakes. These men have learned proper methods by long experience, and why should we not give our children some direction as to the right and wrong methods of setting about their work, instead of leaving them to follow along in the methods of their parents and grand-parents, only to find out correct methods after repeated failures. I believe that we owe it to our country and to our children to provide for them some means whereby thy may profit by our experience, and by the experience of those who have made a special study of the conditions necessary to success.

How may this be done ? I will try to tell you some of the things that might be done in our schools ; first, as they are present, second, as I would like to see them equipped. To make myself clear, I will take a definite example. Suppose that when spring opens the teacher would ask the pupils to watch for the earliest appearance of the tent caterpillar. Ask them to cut off the branch on which they appear and bring it to school, the position and appearance of the egg masses may be shown them. Push the cut end through a piece of paper and place in a bottle, filled with water, set it in the window and await developments. The twig will leaf out and blossom, the worms will feed on the leaves and grow rapidly, the water will disappear rapidly from the bottle, and will need replenishing every day or so. When the leaves are about eaten it will be necessary to bring fresh branches, to be placed in the bottle, or in another bottle, alongside, and leaned against the others. The caterpillars will continue to feed and grow lustily until about the middle of June, when they will be full grown and become restless. When this is noticed the bottle containing the branches and nest may be placed in a wooden box, fitted with a lid, to prevent escape. The worms will shortly disappear, and all that can be found are small, white cocoons. Ask the pupils to bring a small pasteboard box of any kind, and give each a cocoon to take home and examine daily. About the middle of July the cocoons will hatch out into small, brownish moths. The children may afterwards be told that these are moths that lay eggs on the trees, which hatch out the following spring, to form a fresh nest of caterpillars.

What will the pupils learn from this ? They will learn what very few farmers know, viz., the amount of damage that must be done by a few nests of these caterpillars. This is not so easily detected on the tree, as it is continually putting out fresh

leaves as the first ones are eaten. Their attention could be called to this, and they could be easily led to see that the effort and nourishment necessary to do this must reduce the power to produce fruit. The relation between leaves and light could be shown, as these second leaves would not have appeared if the buds had remained shaded by the first. This fact might lead to some of the principles underlying the object of pruning. The large amount of water needed by a growing tree would be apparent to them, and the necessity and methods of providing for this in their care of the orchard might be discussed. By watching the habits of these caterpillars, he will see that if he wishes to destroy them he must either kill them by spraying, as they eat the leaves, or he must remove them during the cool of the evening or on a cool day, when they are at home. He will learn that without careful watching and attention he cannot make a success of his orchard, and as this moth flies far, he will learn his responsibility to his neighbor in the matter of destroying as many of the nests as possible. Above all, he will learn that it is a simple matter to trace the life history of such pests, and, knowing this, will he not, when grown to manhood, approach similar subjects in a more intelligent manner than he would had he received no such training? It is not so much the knowledge although that is exceedingly valuable, as the training he receives in the manner of approaching the subject.

I could dwell on example after example, but these will suggest themselves to every worm, the potato bug, the pea bug, the house fly, the wiggler in the rain barrel. The object is not to multiply examples, but to illustrate methods and to show the pupil that he can work out for himself new cases that confront him in later life.

So much for insect life; now let us consider other life. Could not a boy be made familiar with those plants that are injurious, their habits, their surroundings, and methods of eradication? Could he not be taught by the examination of the contents of the crop how to determine what birds are beneficial and what ones are injurious? Could he not be taught to determine the quality of the soil? By stirring a handful in a bottle of water, the sand, being heavier, settles first, the clay next, and the vegetable matter last. He is then in a position to find out for himself in what one soil excels and in what another is deficient. By a few simple experiments and observations he could easily be led to find out the effect of too much rain on one kind of soil or drought on another. He would then be able to discuss drainage and fertilizers intelligently.

School Equipment. Now a few words as to how I would like to see our schools equipped. I would like to see every country, or even town school, provided with a plot of ground varying from one-half to one acre, according to attendance. This could be divided into our sections, one would contain fruit trees, both large fruits and small, as well as a few ornamental trees. Many very useful and educative lessons could be taught from these, e. g., grafting, budding, spraying, wrapping, transplanting, methods of growing fruit trees from seed, etc. The second section would be the vegetable garden. Plots could be assigned to each child, in which methods of preparing his soil and planting his seed might be illustrated. The third would be the experimental portion. The pupil would be directed to sow his seed broadcast, in drills, thick or sparingly, at a depth of one, two, three inches, etc. The fourth would be devoted to horticulture. Lack of time prevents my entering into any extensive description as to how this school garden, as it might be called, could be used to the greatest advantage of any pupil.

This programme is extensive and may sound revolutionary, but I leave each of you to answer the question for yourselves, whether this method of training the mind, that I have tried to outline, when the pupil is set to work under proper direction to solve these problems for himself and learn to ask himself the reason why, is not a better one than where the pupil sits trying desperately to memorize a lot of data, of which he understands little and cares less. Would not this method be the best kind of mental training, no matter what might be his aim in life? Would it not tend to develop that thinking and inquiring mind that asks itself the reason why, and is not content with tradition?

Now, some very clever man will say, as did an American educationist, "You would give us nothing but hayseed schools." I do not speak against the present work done in the public schools; far from it. I do not think there is a harder working or more conscientious class of people in Ontario than our public school teachers, but the pressure is so great and the drudgery so wearing that they have not time for this, nor have they anyone to guide and direct them aright.

But, you say, we have our public school inspectors. You have one here ; you know him; I do not, except by report. I do know he is strong on continuation class work. I believe in continuation classes. The brains and energy of this, or any other country, find their way to prominence from the farm, and the hardest part of that journey is that which lies between the public school and the university, and it is our duty to make it as easy as possible. But I appeal to you as intelligent men to consider if any school with one teacher has a right to expect continuation classes. Surely the vast majority of younger pupils, who can only remain in school for a few years at most, are being neglected. It is well to encourage continuation classes where it can be done without neglecting the majority for one or two, but there is a greater work for inspectors than trying to establish more continuation classes than the neighboring inspectorate. This work is to keep abreast of the times and needs of the country, and in it the inspectors should encourage and guide the young teacher. It is a great work, a heavy task, and without the sympathy and direction, which he has a right to expect from the inspector, what wonder if the task becomes too heavy for youth and inexperience, and the crushing word, "failure," has to be written over against his work.

What has the Government done, and what is it doing ? What it has done you know as well as I, but I might mention what it is doing. Sir William McDonald, of Montreal, has donated $125,000 to the Agricultural College of Guelph for the establishment of a school where the public school teacher may receive the necessary training to carry out some such work as I have outlined. The Government will, no doubt, support this school when built, and maintain it, if necessary.

Now let us see what county councils and agricultural societies could and ought to do to help on this work. Prizes of sufficient value could be given for, say the best collection of injurious plants, injurious insects, the best methods of teaching the work as proved by the work of the pupils, the best vegetables, fruit, etc., grown by the pupils, all of which work must be certified to by the teacher, and, if necessary, a statement furnished by the inspector, to show that the work is being well done. In these and other ways the work could be encouraged.

The question is frequently asked, "Why does the boy leave the farm?" Various reasons have been given and cures propounded, but I do not think anything would have a more beneficial effect than to open his eyes to the fact that he is living in the midst of beauty and plenty if he is only prepared to make use of these opportunities. His calling would be clothed with a new dignity and value, and he would not only cease to be envious of the boy in the city, but learn to pity him. Only in this way can you stay this great exodus. Teach him to know that the farm can be made profitable, if he will only bring intelligence to bear on his work. Teach him to see some of the beauties and possibilities that surround him, and he will be more satisfied and crave less after the uncertain glamor of the town.

MACADAM ROADS.

By Major James Sheppard, Queenston.

Our country roads have not been made on any particular plan, or organized system. They have just been built as the demand for them has arisen, and on the plan most in use in that particular locality. They were not made by one appointed, because he knew nothing about road-making, but because he was a friend, politically or otherwise, of the

Council. In consequence of this lack of system, we have the roads as we find them to-day. In this we are not worse than others. We often hear of the grand roads in the Old Country, but what was the state of those roads one hundred years ago?

In the neighboring republic we have often heard of the millions they are spending on road improvement, but while no doubt they are making great efforts to improve their roads by States, and by building stretches of model roads, still the percentage of their roads that have been improved is no greater, and I am in doubt if it is as great, as with ourselves. In England up to the year 1820 no great improvement had been introduced in road-making. Old methods are being followed, everyone making a road after his own plan, or as we sometimes do here, without a plan at all. Although a good deal of improvement had been made on what was known as the Coach Roads, no uniform system was in use. Every overseer made his portion of the road and kept it in repair as he thought best ; in fact, these early roadmakers were the fathers of our path master system.

In the year above mentioned a Scotchman named J. L. Macadam was appointed road surveyor of the district around Bristol, and it was not long before the Government and people of England began to realize that a new era had begun in road-making, but it was some time before the general public became interested, and even when Macadam's work and writing attracted the men of science, no one realized that another had been added to the list of those few immortal names " That were not born to die," for as long as the English language is spoken, or, in fact, any other modern language, Macadam and the principles he adopted and advanced will never be forgotten, and for all time he will be remembered as the father of modern road-making.

Macadam's Principle of Road-making. It would be well to consider for a short time what is a "Macadam" road, and what are the underlying principles on which it is built.

1. Drainage. Macadam said no water should be allowed within six inches of the grade of the road. When giving evidence before a committee of Parliament, Macadam said: " Ten inches of finely-broken stone, properly applied, will carry any traffic."

" That is if on a hard foundation?" somebody asked.

"No, I do not care whether the foundation is soft or hard, if it be well drained,"

Q. " You do not mean to say that you could put a road through a bog?"

A. " Yes, if a man could work on the bog to drain it, for the road would wear longer on the soft foundation."

2. Grading. A properly shaped and graded road before the broken stone is used.

3. Material. All stone broken to as even a size as possible. Macadam gave the maximum size as six ounces, but in no case large or unbroken stone to be used.

4. Construction. The stone to be put on in layers and rolled or consolidated by the traffic before more was applied.

5. Facing. No material to be used as facing or bonding that would hold or absorb water.

Before Macadam's time road builders thought that on the amount of material used depended the ability of the road to bear traffic, and the larger and coarser the material in the foundation, the better. This he proved to be erroneous, as he was able to demonstrate that the finer the stone was broken in the bottom layers, the more stable was the road. At first sight this seems to differ from Telford's method, whose practice was to lay a stratum of large stone in the bottom as a foundation. The large flat stones laid smoothly on the well-rolled subgrade of a properly-excavated street, then other stone broken and placed on top, and firmly rolled, makes a solid foundation for the finer broken stone to rest on. Stone broken to a uniform size and properly prepared and firmly rolled on a properly prepared surface also makes an even and uniform foundation, but at a cost not exceeding one-third of a properly-built Telford road. Of course, it is not claimed that for city or town streets that have to bear continued heavy traffic, that ten inches of Macadam would be sufficient, or that a Macadam road is as well adapted to such conditions as the more expensive Telford road, but Macadam was not a city engineer ; he built

roads in the country and for country use, and no one since his time has been able to improve much on his methods, or to demonstrate that roads can be built on a more permanent basis or cheaper than by following the principles he laid down.

Mistakes in Road-making. At the present time quite a lot or road-building is being done in this Province, and the honored name of Macadam is used to designate the work and practice now in vogue. As to the first principle, drainage, in many cases no effort is made to carry the water even in the side ditches. No cross culverts are put in to take the water from under the stone, and road builders forget that if there is a low place in the road, filling it with stone will not prevent the water collecting there. The road is not levelled or rolled, the stone is not broken to a uniform size, sometimes the stone is thrown on the road and broken by hammers, jarring to the bottom all the small particles that ought to be on top to help form a bond. At other times large unbroken ttone is dumped down and covered with dirt or gravel, to work up in a year or two and make the road always bad, when if this had not been done it would have been a good dirt road at least part of the year. The usual practice is to place a strip of loose stone from six to seven feet wide along the centre of the road ; no rolling is attempted, nor are the stones screened or graded, or any bonding material used. This stone is kicked about by the horses feet, rutted by the wheels, and it generally takes two years to consolidate it so that it can be driven on with comfort, and by that time it is about used up and the process has to be repeated. Is it any wonder that many people are against these so-called Macadam roads ? But to the man who has studied the principles that Macadam practised and advocated, and knows the result that follows when the work is properly done, then compare it with the average road-building we see every summer, one is led to exclaim : "Oh, Macadam, Macadam, what fearful things are done in thy name !" When will our road-makers realize that a half-done job is money wasted ? What would they think of a man who built a barn and neglected to put the roof on it ? He would be no more foolish than the man who thinks to build a road by throwing a few loose stones on an ungraded, undrained roadbed.

Q. Has the agitation that has been carried on for the improvement of roads produced any result ?

A. Major Sheppard, Queenston : The efforts of the Good Roads Association and other progressive men have produced decided results. Our roads are improving, better machinery is used, and a better system of doing the work practised.

POINTERS FOR ROADMAKERS.

From Report of Commissioner of Highways, 1901.

1. The steepness of hills should not exceed a rise of one foot in twelve.

2. The roadway graded for traffic should be in the centre of the road allowance, and should have a uniform width of 24 feet between the inside of edges of the open ditches. The width of roadway on cuts and fills should not be less than eighteen feet.

3. Side slops in cuts and fills should be one and one-half feet horizontal to one foot vertical.

4. The crown given the newly-finished roadway should be uniform and have a rise of one inch to the foot from the edge of the ditch to the centre of the road.

5. When gravel or broken stone is used it should be placed to a width and depth sufficient to form a serviceable road, having due regard to the character and extent of the traffic.

6. The gravel or broken stone used on the road should preferably be obtained in the vicinity of the road, but must be of good quality.

7. As a rule the gravel or stone should not be of less width than eight feet, nor of a less depth in the centre than nine inches.

8. Where roads have heretofore had gravel or broken stone placed on them, they should be repaired by cutting off shoulders, shaping with a grader, and adding a suffi-

cient amount of gravel or broken stone to fill ruts, depressions, properly crown and make a road sufficiently strong to accommodate the travel.

9. The gravel or broken stone placed on any road should be thoroughly rolled; otherwise the grade should be maintained by careful raking or scraping until compacted by traffic.

10. An open drain should be made at each side of the road, and given a sufficient fall to free outlet.

11. Durable sluices and culverts should be built where necessary.

12. Tile underdrains should be laid, so as to carry away excessive sub-soil water, lower the water-line, and secure a dry roadbed, wherever a moist, damp, or springy condition of the sub-soil exists.

13. Modern machinery and implements should be used as far as possible to secure the greatest results from the expenditure, and to provide the best work.

14. Where, owing to special local conditions, any departure from the foregoing regulations may be desired, upon application of the council, an examination of the road or roads in question will be made, free of charge, by an engineer of the Public Works Department, for the purpose of deciding upon a suitable plan.

MANAGEMENT OF THE FARMER'S WOODLOT.*

By Wm. N. Hutt, Department of Agriculture, Toronto.

I think it may safely be said that the farmer's woodlot or bush receives less care and attention than any other part of the farm. Indeed the woodlot is hardly considered as part of the farm at all. The attention it generally receives is the destructive blows of the axe in winter, and the no less harmful browsing of stock in summer. Under this treatment the wood is constantly decreasing in quantity and value, and the land lies as an unprofitable, stumpy waste, which is neither wood nor pasture, or is turned into cultivation, for which, being generally poor land, it is little fitted. Doubtless this unproductiveness of the woodlot is due to the fact that farmers generally do not consider the bush capable of any systematic management or regular cropping, or at all capable of repaying any labor expended upon it.

As farmers we are apt to consider bush land as something to be cleared up, and not to be perpetuated, or as a gift of nature for our own special benefit, and one that cannot be renewed. The time it takes for a seedling tree to become of marketable value is not as long as is usually supposed. Of course, if we had to begin on a bare field to raise timber, it would be a somewhat different matter. But in the ordinary woodlot we find trees of 10, 20, 30, 50, or even of 70 or 100 years of growth.

Nature if left to herself will gradually change a scanty coppice into a forest of value, but at best her methods in forestry are slow and somewhat irregular. However, by careful thought and practical management, nature may be so assisted that the woodlot may be made to supply no only all present needs for fuel, but to give regular crops of merchantable timber, and to be year after year increasing in permanent value. Growing forest trees are very susceptible of management; the crooked may be made straight or the straight crooked, the spreading may be made close, or the close to spread, just as we wish. While the prices of wheat and other farm products have been decreasing, and are likely to decrease still more, the price of lumber, owing to increasing scarcity, has been continually going up. We are painfully reminded of this fact if we wish to put up any building, however small. Any woods under careful handling may be made to produce regular, if not annual crops without the expenditure of a single dollar for replanting.

With these few facts in mind, it is our intention to outline the practical management of a woodlot, such as we might find it anywhere throughout the country, with a view to attaining its greatest present usefulness and permanent value.

* The illustrations in this article, by the courtesy of Mr. Gifford Pinchot and the United States Bureau of Forestry, were taken from Pinchot's "Primer of Forestry," published by the Bureau.

Taking a sort of inventory of an ordianry woodlot we would find it somewhat as follows : 1, more or less (generally less) of mature trees ; 2, trees past maturity ; 3, premature trees ; 4, healthy growing trees ; 5, coppice and seedlings ; 6, stump land ; 7, waste, i.e., with no wood on it whatever.

1. Mature trees are those which by reason of age have arrived at their greatest size and most valuable quality of timber, and are therefore ready for cutting.

2. Trees past maturity are those which have not been cut on becoming mature, have become dead at the top, and the rain getting down into them has destroyed the quality of the wood. Finally, the trees become hollow, and though they may be annually laying on new wood underneath the bark, yet, owing to the action of insects and wood-destroying fungi, the rate of decay gradually exceeds the rate of growth, till some day the wind brings them down as useless old shells.

3. Premature trees are those which by reason of some accident of wind or storm have become broken and decayed, and, being thereby checked in growth, thy never

Chestnut sprouts from the stump.

make valuable timber. A dead top and stunted growth are generally indicative of the premature condition.

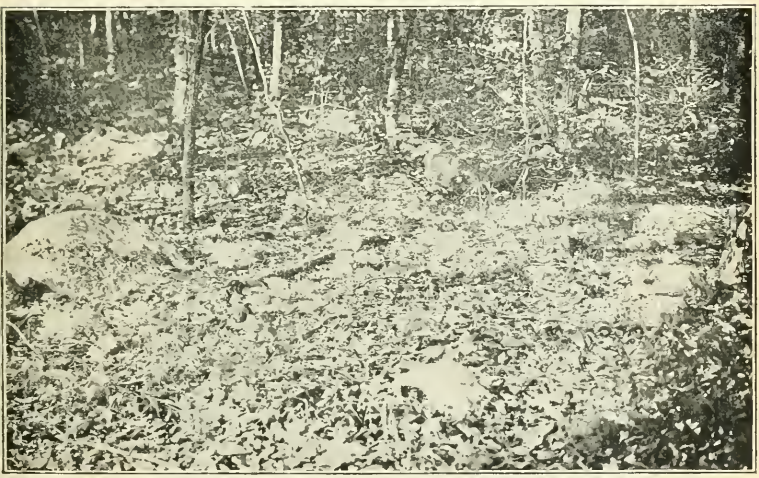
4. Healthy growing trees are those which are to take the places of the mature trees as the latter are removed.

5. Coppice consists of the shoots that spring up from the stumps of trees that have been cut. See figure 1. That seedlings are the tiny trees which have come up from the seed of mature trees.

Methods of Replanting. The first thing to be done with the woodlot is to get it all under crop. There should not be a square rod of it that is not producing trees. Land in a wheat field not producing wheat is waste land ; land in a bush that is not raising trees is also waste land.

Reproduction of Trees. All trees reproduce themselves naturally from seed, some also by coppice and under natural conditions the mature trees would see the ground around them. In this way spaces would gradually become filled up with growing timber. If, however, stock are allowed to graze in the woodlot the seedlings and undergrowth are prevented from coming up, and all natural provision for the perpetuation of the forest is cut off. The rough pasture on the few open spaces in a woodlot is of very little value, while the harm done to the trees is very great.

Keep Out Stock. One woodlot which I have had under observation gave a very clear proof this last year. In the spring, as growth started, around the mature trees could be seen coming up in a fine crop of young seedlings. In a few weeks cattle and sheep were turned into the woods. In summer the pasture became very bare, and the stock browsed off the leaves of the little seedlings. Owing to excessive drought in the early fall the pasture was not renewed, and the stock ate off not only the leaves, but also the green shoots of the trees and shrubs as high as they could reach. In the fall, when the stock were taken out of the woods, there was not a seedling to be seen, nor a leaf, nor a green shoot on the older trees within five or six feet of the ground. Under this treatment, year after year, this lot has produced no new trees, and the old trees being removed, it is becoming an unprofitable, stumpy waste. But by far the greater injury from stock results indirectly from the trampling of the soil and the consequent destruction of the natural mulch about the trees. On the vegetable mould of the forest floor depend largely the health and vigor of the trees. This mould, which is composed chiefly of decaying leaves and twigs, is of a very porous nature, and forms a natural reservoir for water. See



The natural forest floor.

figure 2. Under the shade of the tree tops the moisture of the vegetable mould is given up slowly throughout the season, and the air about the trees is kept in that humid condition so favorable for plant growth. The downward movement of water through the forest mould is also slow, and as the water table gradually lowers the roots of the trees push downward through the softened subsoil. For this reason forest trees under natural conditions are deep rooted, and are seldom blown down by high winds. Moreover, by virtue of the slow movement of the water in the forest mould the springs of the woodland have a continuous, even flow throughout the year.

One of the most noticeable features of pastured woodlots in the absence of the natural forest mould. The sharp feet of stock cut up the soft turf and pack it, so that its water-holding capacity is practically destroyed. For this reason creeks become in spring rushing torrents, roaring down hillsides and tearing away the fertile soil, and are dried-up, rocky gullies almost before summer comes. Rain falling upon pastured woods finds

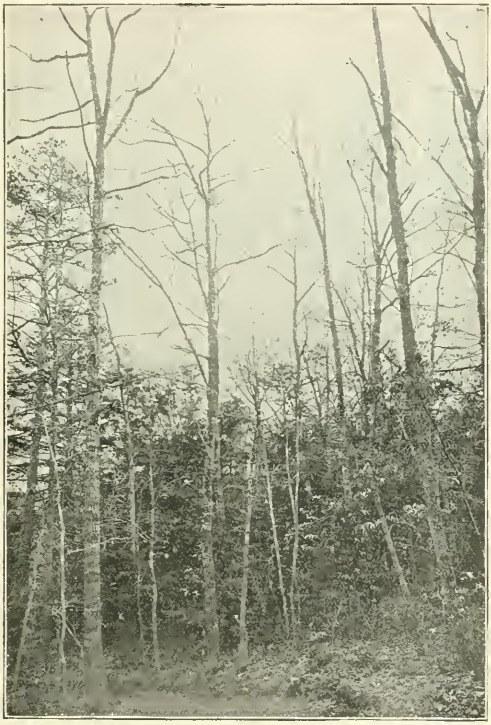
in the soil no natural reservoir, but passes quickly through the soil to swell for a few hours the creeks and is lost to the trees. When summer comes the soil of a pastured woods is hard and cracked like a bare fallow. The rain which fell upon it passed through it so quickly that the roots of the trees have been unable to follow down after the too-rapidly-receding water table. Deep root growth under such conditions is checked, and the trees are frequently blown over by strong winds. It is not an uncommon thing on closely-pastured woodlots to see sturdy oaks and maples, or even the tough-rooted elm, overturned by the wind.

Besides being a reservoir for moisture, the forest mould is a natural seed bed, and a nursery for nuts and seeds which fall upon it from the trees above. It must be known that seedlings of forest trees are among the most delicate of all plants, and require during the early years almost ideal conditions of vegetation. In the deep, rich mould under the protecting shade of the parent trees, the little seedling finds this ideal condition of growth in which to start. When a break occurs in the leafy canopy overhead the little tree stretches up quickly to fill the gap. The parched and trampled soil of a pastured woodlot offers only a lingering death to the tender seedlings and nature's means of perpetuating the forest is cut off. For this reason pasture ranges are always characterized by a decreasing number of trees, and the roots of them, lacking their natural protection, the trees have always a stunted, scrubby appearance. On constantly pastured woods it is not an uncommon thing in a dry summer to see large trees wither up and die. Doubtless these trees had been resisting adverse conditions for years; the wonder was that they lived so long. I have on account of its importance treated this phase of the subject at considerable length, and would finally say that it might be set down as a maximum in forestry that pasturing stock about trees is absolutely antagonistic to successful wood culture.

After all stock are kept out the older trees will seed the waste places, but as the sod has usually become very tough in most bushes, the seedlings have lessened chances of surviving. It has been found to be the cheapest and best method to break up the land where possible and seed it artificially, or plant it with trees.

Methods of Seeding and Planting. When possible, a good way is to plow up the land and make a seed bed in which the little trees are grown and tended until they are able to take care of themselves. Tree seeds are not produced annually, but generally every second year, and will not stand drying like other seeds. The nuts and seeds of broad leaf trees are best collected as soon as ripe and packed in moist earth till sown. Chestnuts will be injured in germinating power by drying even for tweny-four hours. The seeds of pines and other evergreen trees may be best kept by gathering the ripened cones in the fall and storing in a dry, cool place till ready for planting. When cultivating up the land and seeding is not practicable on account of stumps and rocky hillsides, trees may be transplanted from a nursery, or the young seedlings may be taken from the woods. By sowing the seeds in the nursery row and giving them garden cultivation larger trees may be grown in a given time, but the tap root is cut off and they have a tendency to spread out into branches instead of growing long straight trunks. Nursery-bred trees when placed on poor soil and left to shift for themselves are usually overtaken by seedlings under natural conditions. The seedlings grown from nuts have very long tap roots and will not bear transplanting. Nuts and acorns should therefore be planted where the trees are to remain. A method I have found very handy in planting large seeds, such as nuts and acorns, is to punch a hole in the sod about four inches deep with a light crowbar, and to drop in the seed and cover it, pressing the earth in firmly with the heel. Plant nuts thickly, using not less than 10 or 12 per square rod. This will be at the rate of about one-half bushel per acre of shelled nuts. Seedling trees may often be found growing in great numbers under the shade of the mother trees. These may be removed in moist weather and put in with a dibble, where required, putting in not less than four trees per square rod. On lake beaches or drifting sandy wastes it if often next to impossible to get any useful species to grow. In cases of this kind some-quick-growing varieties such as poplar, willow or box elder are planted as nurse trees, and as soon as some humus is collected about them the seedlings of more

desirable trees are planted under their protecting shade. After the useful species have become established the nurse trees may be cut for fuel and the latter come on and take possession of the soil. Many kinds of seedlings are very delicate and slow growing during their first few years of growth, and need to be shaded from the scorching rays of the sun. It is for this reason that the best seedlings are usually found in the moist shade of the mother tree. Weeds or any leafy plant will afford a useful shelter for the little trees, but, on the other hand, if the weeds grow too rank they may shut out the sunlight and starve them. It is well to go over the plantation with a scythe and cut away the weeds where they may be growing too thick and overtopping the young trees.



Mixed growth of shaders and shade enduring trees.

Kind of Trees to Plant. The question arises, what kind of trees should we have in the woodlot? This will depend somewhat on the nature of the soil, but we should prefer to have those native species which have the highest market value. The soil of the woodlot is usually the poorest of any soil on the farm, and rightly so, for all crops on poor land wood is that which will give the largest yield.

White Pine. If the land is high or gravelly or sandy it might be stocked with white pine, which is "the king of all forest trees." However, pine if often found on land that is pretty stiff in texture, but its growth there would be slow.

Chestnut. Chestnut is also suited to light and well-drained land, and has a high value for furniture, railway ties, posts, etc.

Elm. Elm by virtue of its present demand for making furniture, baskets, bicycle rims, etc., is becoming a valuable timber, and it has the advantage that it is a rapid grower and will thrive well on almost any land, even where it is too wet for most trees to grow. It has been selling locally at $6.00 per 1,000 feet, or $9.00 per cord.

Hickory. Hickory is a tree valuable for its nuts as well as for its timber. Some farmers living near Niagara Falls derive quite an important revenue from hickory nuts grown on their farms. Hickory is worth $12.00 to $15.00 per cord for making spokes and tool handles. The young trees come into value when not more than four or five inches in diameter, and the yearly thinings from a woodlot have a considerable market value.

A good thick forest cover.

Basswood. Basswood is a rapid grower, and is much used in making carriages, cabinet work, and orangs. It is also a valuable honey plant.

Ash and Maple. Ash and maple are much used for interior house furnishing.

White Oak. White oak is at present the fashionable wood for furniture.

Cedar. The cedar can be grown in swamps and places too wet for any other tree, and few trees are more valuable.

Black Walnut. Where it can be grown there is no more attractive or valuable tree than the black walnut. For use in making expensive furniture it rivals mahogany, and has been known to sell as high as $100 per hundred feet rough.

Mixed Plantations. Trees seem to do better in mixed plantations than when planted all of one kind, and there is the further advantage that by raising different varieties almost double the number of trees can be grown per acre. Forest trees vary much in the amount of shade they bear. Some, like the beech, the sugar maple, or the spruce tree have a dense crown and are thickly leaved down the trunk, and in the interior of the crown. This shows that the leaves can exist and perform their work in a small amount

of light; in other words, the beech maple, and spruce are shade-enduring trees. On the other hand, there are trees like the walnut, the chestnut, and the oak, which have scanty foliage, and do not have leaves inside of or under the crown. This shows that their leaves cannot perform their functions in the shade. Such trees as these are light-needing trees. The shade-enduring varieties can thrive well under the diffused light of the light-needing trees. For this reason we may just double the number of trees per acre by combining the shade-enduring and the light-needing trees, and the addition of the former will not be a detraction but a benefit to the latter. See figure 3. Under ordinary conditions the trees should stand so thickly that a man with an axe in his hand would be able to touch half a dozen trees in a circle about him. See figure 4.

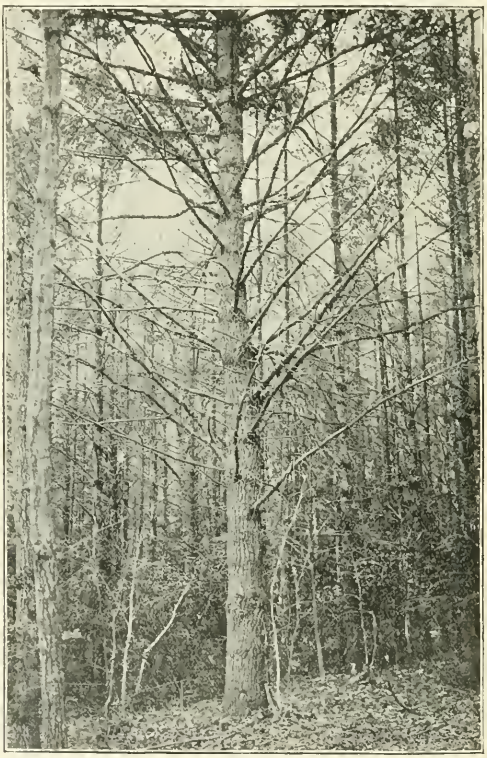
Trimming and Cutting. As soon as the woodlot is entirely under crop, and of the desired varieties, the treatment will consist in taking out the weeds of the forest, or, in other words, all trees of inferior varieties, and those that will not eventually make large, valuable timber. Such trees as hawthorn, ironwood, blue or water beech, are of dwarf, crooked habit, and never make valuable timber, even for fuel. If there are promising young trees of more valuable varieties that would take the place of these, the inferior trees should be cut away. Such trees as red oak, yellow birch, willow, etc., though of larger habit than the last, could profitably give place to more valuable species. However, no tree should be cut unless there are young trees growing under its shade,

Trees standing too far apart to help each other.

which will in a few years fill up its place. The trees should stand so closely that no grass can grow under them. When the forest shade becomes so scanty that grass takes the place of the natural mould or humus covering, it may safely be said that the trees are not thick enough, and under such circumstances no thinning or cutting whatever should take place. See figure 5. If the forest cover is thick enough all premature trees should be cut out. These may be of valuable sorts, but will never make timber of good size or quality. Other trees again are comparatively useless for timber because they have been started under open conditions, and the trunk is short, and branched into many limbs. These trees will never make much but fuel, and should as soon as possible gives place to better trees. Of seedlings only the most promising should be allowed to grow, but a small, crooked tree may make a straight upward growth after having its top cut off, so that its energies are directed into one straight, vigorous shoot.

Forcing Timber. When the inferior trees are cut away and their places taken by straight, vigorous trees, the management of the woods consists in simply forcing on to maturity the remaining valuable trees. Where trees are grown very thickly there is a constant competition among them for each to stretch up to the light and overtop the others. This competition causes them to grow up very long, straight stems. The shade

of the tops makes the lower and inside branches die, and drop off, and the trunks are thus rendered free of knots. See figure 6. By the proper proportioning of the light-needing and the shade-enduring trees the latter may be used in forcing the upward growth of the former, while the denser foliage of the shaders will be effective in denuding the other trees of side branches. The shade-enduring species do not suffer from the shade



Imperfect natural pruning of a white pine that had stood too much alone in early youth.

as the smaller, light-needing trees would under their mother trees, and so they are forming timber in what would be to the other kind of trees impossible conditions.

Those trees which can overtop the others and get the most light will make the greatest growth, while the continual stretching out of the others will force the leaders in maintaining their supremacy to keep lengthening their trunks. This goes on until the limit of height for the variety of tree is reached. The tree will have a very long stralght trunk, but will be of little value, as it has no great thickness. If the sur-

rounding trees which have forced this tree up in height be removed it will develop a spreading top, and direct its energies towards growth in thickness.

This is the life of a forest tree, and only when it has attained its proper height and developed a crown does it begin to make much wood. When the mature tree is cut out those trees under it, which have suffered form its shade, at once begin to branch out and take up its place.

Practical forestry management then simply consist in assisting the process of nature and sometimes even in forcing her hand to direct the growth and hasten the maturity of trees.

THE HOME GROUNDS.

By D. A. A. Nichols, in "The Weekly Illustrated Buffalo Express."

A friend, who has spent some money and much time on his home grounds, is not satisfied with the result, as the effect is not what he supposed it would be. He supposed that a lawn primarily meant an expanse of grass surrounded and partially covered with trees and shrubs. We say, "we will walk on the lawn," and the thought of soft, velvety, close-shorn grass is immediately present. William Robinson, the noted English landscape gardener, speaks of it as a garden, while to give the true idea of it to people on this side of the ocean we must call it the home grounds. A good lawn includes trees, flowers, shrubs, rocks in some localities, etc., and the value and effect of a lawn consist in the arrangement of these things. Mr. Robinson advocates, in the garden, the treatment of the "garden" in a manner which will harmoniously unite it with the landscape beyond, thus making a beautiful whole of the near and distant surroundings of the house. The house must be architecturally in harmony with the locality, and then the grounds, before and behind the house, if there be room, must correspond with the architecture of the buildings, and with the topographical and other points of the landscape to be seen from that point. If everything is in harmony, according to Nature's work there, the lawn effects will be satisfactory to the artist and to the unskilled as well. The front doorstep is a good point from which to study the lawn, and its background. And if there be any landscape behind the buildings it must be studied from the back stoop, if there be one.

Viewed from the Front Door.

The planting of the lawn, therefore, must be planned from the view at the front door. In general terms, it may be stated that, as a rule, the front lawn must be an area of grass, bordered by trees, shrubs and sometimes flowers. The friend mentioned planted his trees and shrubs mathematically distant from each other, and in regular lines. The trees have grown to a good size, and now all distant points are shut out from view, and the turf of the lawn has become spotted and uneven in color. He forgot when he planted his choice trees that they would sometime grow to large size, some of them at least, and so now he is "cabined, cribbed, confined" in a shady grove, with no outward look. The ground was made fertile and deeply worked, and the plants were well and carefully set, where himself and his hired man decided they would best be placed. The future prosperity of the trees was wll provided for, but no account was made for ultimate size. Any good landscape gardener would probably have suggested to him that with care such trees would grow tall and wide, and that they should have been so planted that the beautiful distant views should never be completely hidden. The popular notion that a lawn is a place for us to treasure beautiful trees, flowers and shrubs, is entirely misleading, being too narrow, so that in attempting to get and preserve beautiful things we deform our grounds, whether they be large or small. We are apt to plant too much, and to spoil beautiful pictures which would be far more attractive than the possession of rare plants, often too crowded to preserve their natural beauty and real value. Open outlooks are frequently lost through the ambition to have a fine specimen of some rare tree or shrub.

To Broaden the Outlook.

As far as practicable, the lawn should be so planted that it may seem as wide as possible to be made. Planting the borders in clumps with peninsulas of grass running into and apparently behind them makes the lawn look as if it extends outward indefinitely, adding materially to the broad effect where the area is decidedly limited. These points of turf can be put where there is a line of view to a beautiful distant landscape, and so be made doubly useful. A New Hampshire man whose lawn was large and set full of trees and shrubs, found that his house was too much shaded for good health. So he employed an intelligent Boston landscape gardener to advise him what best to do to keep a good lawn and also get plenty of sunshine. Most of the trees around the outside were left, some needing a little pruning; the trees in the central portions were dug out, and the shrubs were dug out and replanted in masses in the corners, leaving an open area of grass which looked larger than the original lawn, and giving unobstructed views of neighboring hills and mountains in three directions, and yet when the grounds were viewed from a neighboring hill they appeared to be as shady as they were before an improvements had been made. A berberry hedge along the street in front was left, so that the effect of an enclosed English "garden" was retained, while the apparent size of the grounds was doubled, as viewed from the street. A lawn mentioned by Jacob Riis in his "Making of an American," as "decorated" by cast-iron dogs, has recently had half its trees cut out, and yet those left are so scattered about the lawn that it impresses the observer with a sense of confinement, or crowding, while a neighbor's lawn, not two-thirds the size, is so planted that it appears much the larger of the two. Just beyond is a lawn cut in two by a row of hydrangeas and golden elders, so that from the street the house appears to be set in a small lawn back from the front, more retired and cut off from view than the New Hampshire one not so large, with its barberry hedge in front. The general effect is spoiled, as far as landscape beauty is concerned. Such instances are too common, and from them one may learn how not to do it.

Trees should be in Harmony with Surroundings.

It makes little difference as to what trees and plants are used, provided they are so placed that they are in harmony with the surrounding conditions. But it is generally better, in order to secure satisfactory results in the long run, to use trees and shrubs native to the locality. The white spruce of Northern New York is quite sure to live to a much greater age, and to retain its symmetry, than the Norway spruce, which is generally used because it grows faster, costs less to propagate, so is cheaper at the outset. In 30 to 50 years the Norway spruce will begin to fail, while the native sort will scarcely have attained maturity of growth, and then it will retain its beauty another half century or more. In arranging the trees the largest (when full grown) are to form the background of the plantation, being careful not to plant so as to hide fine distant views in the future. Then, as far as color is concerned, the darkest foliage should be farthest from the viewpoint.

Flower Beds

The flower beds, if any, should generally be placed against the foundation walls of the house, or along the borders of the shrubbery. A small lawn will look large and wide if no shrubs or flower beds are cut into the expanse of turf, because the eye has no scale of measurement, while if two or three flower beds or mounds of cannas or bulbous flowering plants are set in the middle of the lawn, the ordinary eye easily estimates the distance between the beds and the border of the lawn, and so it looks limited. The more the beds or shrubs are multiplied, the smaller seems the lawn to the inexperienced eye. In all cases, whether at the first planting, or in making changes, the matter should be studied up from the front door steps, or from the most common point of view for the family, and the work must be so done that there shall be an unbroken ex-

panse of green turf in the middle, with the trees and shrubs and flower-borders around the outside, thus getting the biggest handsome picture possible under the circumstances. We do not want a haphazard, inartistic dotting about of plants on our lawns, nor a Persian rug, nor a set piece of mathematical patchwork. Neither, on the other hand, do we want a tangled wildwood. We want a solid background of dark green, with a scattered mass of lighter green flowering branches and the shrubbery nearer the eye as a stand or set in our favorite place at the house. If the neighboring lawns or fields are naturally or designedly beautiful, the boundary lines of the home grounds can be set sparsely with strips of grass between, so as to make the lawn seem to extend far away. But if the adjoining areas are unsightly or neglected, then the boundary should be set so thickly as to hide the nearby property, except where there is a fine distant scene, and then low shrubs can be made to hide the near undesirable spots. In all cases the arrangement should be as unartificial as possible, unless the buildings are large and architecturally ornate, when an artificial planting arrangement is proper and often desirable.

CHERRIES, PLUMS AND THEIR KIN.

By E. P. Powell, Clinton, N.Y., in "The Independent."

Mr. Lowell tells us that in Korea the cherry tree is an object of respect bordering on worship. The same sentiment is so strong in Japan that a novel turns on the beauty of nature, rather than upon the beauty of woman. "In Japan the cherry tree comes into bloom early in April, and of all the superb succession of flowering trees it is the finest." In masses the people flock to see the sight, and crowds such as are never to be met with at any other time, collect in those places that are famous for their trees. And yet, even with all this tribute of adoration, the beauty is but partially done justice to.

'The blossoming of the cherry tree is one of the great events of the year. To see it is a sensation. It carries you away. You feel as if the earth had decked herself for her bridal, and you had somehow been bidden to the wedding. There are several kinds of cherry trees; some have single flowers like ours, some double ones; but all are covered thick with white blossoms, touched ever so faintly with pink. The trees, laden with their masses of light and color, stand out in dazzling contrast with the brilliant blue of the sky, while the ground beneath is white with fallen petals. Underneath this splendid canopy is the passing to and fro of the pleasure-seeking multitude."

I have a strong sympathy with these nature worshippers. If there is a finer poem than a cherry tree it is not yet written. It is grand in blossoming time, but is infinitely handsomer in fruit. I always dislike to set the pickers into a Montmorency or a Morello. When my catbirds see the May Dukes redden they get into the middle of the tree and give me fair notice that they have pre-empted the whole stock. They scold and lecture me for helping myself to even a handful. Very evidently that cherry tree is something more than a reservoir of food to the bird; he thinks it is too fine to be stripped of its fruit. Bird food, par excellence, is the cherry. But I also find that there is nothing finer for a dyspeptic stomach. When I have a headache I climb a cherry tree and eat all that I care for, which is ——. The colonists soon found out the value of the cherry, as they did of the currant bush and gooseberry, and they formed the habit of planting the trees clear around the homestead lot. In my boyhood I remember such a row of cherry trees, beginning at the street and surrounding four acres. There the birds reveled and the college boys came for their share. Why not? Cherries are certainly good for young ministers, as well as young robins, and they together kept our hands full to get our share. Twenty years later there came a letter from Maine:

"I am now preaching, and, with the rest, I am trying to preach the Ten Commandments. But when I was in college I stole your cherries and your apples and your maple

syrup, and once I got into your bee house. Here are twenty dollars, and I shall have a clear conscience. Next Sunday I can do better with the Golden Rule. You see it has bothered me to keep square with what I teach. Either I must get a different Bible or I must make amends."

I suppose we ought not to have had those cherry trees in sight from the street. It was a temptation, and the boy was not the only one to blame.

But the birds! I never knew one of them to send in a twenty-dollar bill. But this they do, and they do it will—they drop seeds here and there, and they bring to us seeds of new kinds of fruit, and wise men carefully keep these gifts. So it is that at least half of our new varieties of berries, if not our cherries and plums, originate with the birds. Since the black knot has appeared in cherry orchards the trees have grown to be very much less common, until lazy people have none at all. There have not been enough for us and the birds, both together. The reaction is slowly coming about, and cherry trees are once more freely planted. I have fifty trees and more coming on. A good market will take about all the cherries that you can raise, especially of the sour sorts. The profit is good at seven to eight cents per pound (or quart). Generally a six-pound basket can be had for half a dollar, or even less. This makes the cherry a good fruit for the people. For popular use this and the currant go together.

I say to the robins and the catbirds: You shall have ten trees, or one-fifth of the whole; I must and will have the rest. Then the nine-tenths must be covered with mosquito netting. It takes two sheets, or sometimes three, to a tree—loosely stitched together—and at a cost of thirty-five cents a sheet. But if carefully stored when out of service this netting will last for three years, and after that will be of some use in covering melon boxes. So the cost is not unendurable. On the trees the netting must be drawn close and carefully pulled down to the body of the tree, or the orioles will get in and stay there until every cherry is spoild. Other birds eat what they need and then go—if they can get out—but an oriole pecks a hole in each one of the hundred cherries, sucking a drop here and there, and soon making havoc of the whole crop. When covered your cherries can stay on the trees until thoroughly ripe. Uncovered, the Black Tartarians and sour Morellos must be plucked as soon as colored, and before fully sweet. But when covered your sour cherries may hang on until August and September. Then you have fruit in no way to be compared with the bitter and sour stuff generally procurable in the market in June.

Plums, like cherries, are everybody's bruit, and, like the cherry also, this delicious fruit originated in Asia. It has been travelling about the world, appreciated by all nations, and undergoing transformations and evolutions. In this country many varieties are exceptionally hardy, and can be grown in the most northern States, while others are specially adapted for the warmer States, as far south as the Gulf. The special advantage of the plum tree is that it takes little room, and it likes company. A bunch of trees will thrive and blossom and bear as heavily as if each tree were allowed free elbow room. Where you are very much contracted for space, a plum hedge is a good thing. Set the trees about eight feet apart, and you will soon have a good windbreak, besides an annual crop of plums. The native varieties will serve you well in this manner, and so will some of the European sorts, such as Damson, Reine Claude and Grand Duke. The Bleeker or Lumbard plum makes a hedge very rapidly, but it runs to suckers so fast that without steady care the hedge will soon become a lot of dead wood. So it happens that people with small lots can grow cherries and plums, while they are debarred from larger-growing fruit trees.

We have now several distinct classes of plums—the European, of which the more common varieties are Green Gage, Bradshaw, Lombard, Jefferson, Pond's Seedling, Victoria, and the Damsons; the Japan plums, such as Abundance, Simoni, Satsuma; the Burbank hybrids, such as Chalco, Shiro, America, Climax, Sultan, and many more; and the improved natives—a long list—among which are Hawkeye, Milton, De Soto, Robinson and Forest Garden. This is a rich list to draw from, compared with what our fathers had fifty years ago. Mr. Burbank's productions are remarkable every way—large, rich, beautiful; and for the most part they are free from the tendency to rot,

which plagues many of our European sorts. Some new foreign varieties, mostly seedlings, are Diamond, Pearl, Lincoln, Field and Grand Duke. Professor Budd, of the Minnesota Agricultural College, spent several years in scouring the Old World for new varieties of plums and other fruit that should prove to be hardy enough for our most northern States. His importations have proved to be of considerable importance, but not so revolutionary as we hoped. Some varieties from the colder sections of Russia are useful in Minnesota and Dakota. Meanwhile Japan has been sending us some handsome sorts that have proven to be novel in quality, while they are very early in bearing. Like pears, these Japan sorts must be picked before they are quite ripe, and must be matured in a dark room. Those ripened on the trees are without the highest flavor.

We have just one fight over the plum tree and over the plum crop; after that we can rest. Birds do not like plums and rarely touch them. But about sixty years ago a little rascal appeared in our plum yards, with a determination to make the plum the vehicle for propagating his species. It does not eat the fruit, at least, to any destructive extent, but, marking a semi-circle in the skin, an egg is deposited, which soon hatches, and the plum is on the road to decay. If left alone, this pest will soon destroy the whole crop. It was named the Little Turk, on account of the crescent-shaped cut which it plows in the fruit; otherwise it is known as curculio or plum beetle. He is a sly fellow, and if disturbed rolls up his legs and plays possum. That is, he pretends to be dead, and this trick of his is just the thing which has brought him to his undoing. We spread large sheets under the trees, and with large rammers jar the trees suddenly, when down comes the marauder, dead as a stick, and looking very much like a brown leaf bud. This is precisely what he expects us to take him for. But our sharp-eyed hunters know better, and while he is apparently dead they seize him and crush him. If he had remained lively and used his wings he could have got away in spite of us. On the whole, this yearly fight for plums is not so very severe a task. It must begin as soon as the calyx breaks, and continue until the plum skin is tough—about ten days. It is work for our boys and girls, and must be carefully performed twice each day. I see that the tools and sheets are put away each year, with very evident satisfaction on the part of the young folk. The plum tree also has its troubles. A knot quite similar to that which infests the cherry tree, although not identical, attacks many varieties, to their destruction, if not befriended by our help. It is easily mastered on most varieties of plums if cut out twice a year with a sharp knife. But most people wish to have fruit without trouble. They will go without it rather than work for it; and so their plum trees become masses of fungous disease, spreading spores of death into their neighbors' orchards. We had in New York State a statute compelling the destruction of this knot; but it stayed on the staute books only two years. Besides this, the hop louse occasionally gives us considerable trouble by breeding on our trees its spring generations. After several generations of very troublesome eaters, this aphis starts for the hop yards, where it works miserable ruin. Professor Riley showed his masterly skill by tracing out the life history of this insect. The enormous decrease of plum trees in our farm yards during the middle of the last century was mainly owing to the spread of the plum knot. During the last twenty-five years the reaction has gone on very rapidly in the way of replanting. We owe very much to Mr. Burbank and to others who are improving our native sorts and hybridizing species.

For a small garden I should surely have one tree of Green Gage, one of Bleeker or Lombard, one of Coes' Golden Drop, one of Reine Claude, one of Diamond, and then there should be half a dozen of Mr. Burbank's cross-bred seedlings. If I could only have one or two trees, one of them would be Bleeker and the other Green Gage; the first for canning and the latter for table use. The Green Gage concentrates more richness than any other single fruit in existence. It is the very highest standard of quality—if grown in good soil and in the sunshine. If your plot is very small, a mere yard, you may still have a couple of dwarf cherries and a couple of plums, set alternately. The dwarf cherry is simply the Early Richmond or the Morello or Montmorency grafted

on Mahaleb stock. These dwarf trees are not half appreciated by those who have to economize space.

Cherries and plums must never be too much petted, and especially must not be overfed. Rich manures will quickly develop a sappy growth, and then the bark splits, and your trees begin to decay. You must grow your trees without haste. Give them just good garden soil, and keep the grass and weeds away from the roots. Mulch with coal ashes, if possible—half a bushel to a five-year-old tree, to be renewed once in two years. This mulch should be placed about all fruit trees; it keeps the soil loose and moist, and helps the tree to get nourishment from the atmosphere.

I will never let a seedling plum be destroyed, if I can help it. The chances are that we will find it will produce a novelty of good quality; but a seedling cherry you cannot be so sure of. I advise every one who has a few acres of land to have a little nursery of seedling trees. It need be only two or three rods square to enable you to carry on some most delightful and valuable experiments. Destroy the sorts that do not show some sign of marked value; yet each year you will be able to select something from your little plantation that will be your pleasure and your pride. If you can do no more, at least have one row, which you can grow in the form of a hedge, until the inferior can be discarded.

The apricot is in the Rosaceae family, and is a close relative of the plum—perhaps the link between the plum and the peach. It is a native of Arabia, but reaches us also from the far East. There are varieties that bear well in New York and New England, and some of them are hardy as far north as the lakes. The nectarine is only a smooth-skinned peach, and the fruit that we get is seldom of such quality as to make us dispense with the peach. I shall not include a discussion of these trees, or of the peach, because they are not yet trees for everybody's garden. Yet I wish that a great many people would experiment with apricot and nectarine seedlings. Nobody knows when we shall get something of immense value. I shall only add that where the peach cannot be relied upon for outdoor crops it can be grown successfully and cheaply under glass, in common lean-to greenhouses. Plant the trees in boxes, or let their roots run into the soil. They ripen in August, or a little before out-of-door peaches are ripening. The fruit colors finely, but for prime flavor there must be plenty of ventilation and sunshine. Better lift the glass during the summer. The new growth can be shortened in for winter covering. You need no artificial heat, as the peach is a hardy tree, and the blossom buds need but little protection to save them from freezing.

I venture now to go behind the screen, and suggest that cherries and plums are, par excellence, fruits for the housewife. The pleasure of canned fruits is not the eating of them; the pre-eminent fun is in putting them up successfully, and exhibiting them temptingly. The little wife says: "Ah, but you have not seen my cans of plums! Yes, indeed, but they look just too fine for anything!" They do indeed look too beautiful to be disturbed—shelves full of them, suggestive of winter's comfort and of housekeeper's pride. If our people would live more on fruit, as now they easily can, they would be the better for it. "See here," said my Uncle John, "you groom your outside muscles every day and you tuck them in bed every night or rest them in hammocks every day, but your inside organs have to work night and day without rest, till they give out, and then you begin on drugs. It is a wretched blunder. Two apples in the morning are better than half a pound of beef, and a pint of cherries for dinner is better than a suet pudding."

"Bless me," said the little wife, "but you would not forego a cherry pie and a plum pudding?"

"To be sure not," said my Uncle John; "only make the crust light, and have plenty of cherries and plums. One need not eat a barrel of flour to get a handful of cherries."

REPORT

OF THE

FARMERS' INSTITUTES

OF THE

PROVINCE OF ONTARIO,

1901.

PART II. WOMEN'S INSTITUTES.

(PUBLISHED BY THE ONTARIO DEPARTMENT OF AGRICULTURE, TORONTO.)

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REPORTS OF LOCAL WOMEN'S INSTITUTES

No.	Institute District.	Membership to June, 1902.	No. of Meetings held.	Total attendance.	No. of papers read or addresses delivered.	Receipts.				
						Cash on hand per last Report.	Members' fees.	Donations.	Grants.	Miscellaneous.
						$ c.	$ c.	$ c.	$ c.	$ c.
1	Amherst Island	54	11	231	22	15 00	13 50	1 00	20 00	.....
2	Brant, South	58	5	314	7	12 29	8 25	.....	10 00	.....
3	Bruce, Centre	80	16	210	23	....	18 00	.....	20 00	.....
4	Bruce, West	86	16	399	18	13 40	24 75	....	30 00	.....
5	Bruce South	119	10	1,23	24	....	19 50	.....	30 00	.....
6	Dufferin	70	8	96	12	.....	15 00	.....	.....	.....
7	Durham, East	191	16	778	21	2 35	46 00	.....	10 00	92
8	Durham, West	20	11	152	20	10 40	4 00	.....	10 00	.....
9	Elgin, East	58	5	281	14	.....	13 50	.....	20 00	1 80
10	Grey, Centre	13	.....	.....	.....	.....	.....	.....	.....	.....
11	Grey, North	58	5	144	13	6 00	9 25	.. ..	20 00	.....
12	Grey, South	37	3	38	4	.....	9 00	.....	.....	.....
13	Halton	227	14	3,218	30	9 90	58 00	.....	10 00	5 65
14	Hastings, East	169	5	398	11	.....	39 50	.....	30 00	.....
15	Hastings, North	80	7	182	15	5 15	17 25	.....	30 00	.....
16	Hastings, West	120	8	1,853	42	4 30	28 75	2 75	20 00	....
17	Huron, East	71	5	98	7	....	16 75	.....	10 00	.....
18	Huron, West	97	32	1,151	71	8 90	30 00	.....	20 00	.....
19	Kent, West	19	3	50	3	.....	3 75	.....	.....	.....
20	Lennox	20	.....	.....	.....	.....	.....	.....	.....	....
21	Lincoln	162	6	736	10	13 07	42 75	.....	20 00	.....
22	Middlesex, East	9	....	.....	.. ..	.....	.....	.....	.....	.....
23	Middlesex, West	50	.....	....	.....	....	5 75	.....	.....	.....
24	Monck	29	3	42	7	.....	4 00	.....	.....	.....
25	Muskoka, South	19	6	66	21	...	5 00	.....	.....	.....
26	Northumberland, East	61	9	182	17	.....	14 50	.....	10 00	.....
27	Northumberland, West	69	8	100	11	.....	10 00	.....	....	.....
28	Norfolk, North	15	.....	.....	.....	.....	.....	.....	.....	.....
29	Ontario, North	63	8	160	7	20 50	11 25	.....	30 00	.....
30	Ontario, South	96	8	195	20	31 23	24 00	.....	30 00	15
31	Oxford, North	18	6	69	6	.....	3 25	.....	... ...	.....
32	Peterboro, West	50	11	.....	21	4 29	11 00	.....	10 00	20
33	Peel	110	16	982	43	13 60	27 50	.....	10 00	.....
34	Simcoe, Centre	21	.. ..	.....	.....	.....	.....	.....	.....	.....
35	Simcoe, South	66	10	213	12	... ..	9 00	.....	.....	.....
36	Simcoe, West	29	4	54	13	.....	4 75	.....	10 00	.....
37	Union	61	5	370	10	.....	12 50	.....	20 00	... ..
38	Victoria, East	106	9	385	22	7 38	26 50	.....	20 00	....
39	Waterloo, North	33	2	77	6	.....	8 50	.....	.....	.....
40	Welland	50	.....	.....	.....	.....	.....	.....	.....	.....
41	Wentworth, South	119	20	1,190	25	15 05	21 75	.....	20 00	4 10
42	York, East	125	22	437	19	4 55	29 25	.....	20 00	70
43	York, West	73	14	327	11	.....	19 00	.....	10 00	.....
	Total	3,081	307	16,410	638	...	.....	..	....	.....

FOR YEAR ENDING MAY 31ST, 1902.

Receipts.—*Con.*			Expenditures.								
Total Receipts.	Expenses for meetings.	Secretary's salary and Directors' Expenses.	Postage and Stationery.	Printing.	Advertising.	Lecturers' expenses.	Periodicals & Books for members.	Miscellaneous.	Balance on hand.	Total.	No.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
49 50	3 75	.....	3 24	.....	.....	.....	13 88	17 00	11 63	49 50	1
30 54	4 95	.....	6 69	1 50	.....	8 35	.....	.....	9 05	30 54	2
38 00	15	5 00	99	1 25	.....	.....	.....	55	30 06	38 00	3
68 15	2 65	15 00	4 78	75	25	.....	.....	19 79	24 93	68 15	4
49 50	.....	10 00	2 43	1 50	1 00	4 40	13 19	.....	16 98	49 50	5
15 00	.....	50	1 18	.....	.....	.....	.....	9 50	3 82	15 00	6
59 27	2 36	.....	2 23	.....	85	.....	.....	53 83	.....	59 27	7
24 40	1 50	.....	20	2 75	.....	.....	.....	.....	19 95	24 40	8
35 30	5 00	.....	2 81	2 00	.....	.....	10 20	.....	15 29	35 30	9
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10
35 25	2 00	.....	1 30	.....	.....	3 00	.....	.....	28 95	35 25	11
9 00	25	.....	1 40	50	.....	.....	.....	.....	6 85	9 00	12
83 55	11 15	18 96	1 50	3 65	1 50	21 20	11 55	2 21	11 83	83 55	13
69 50	9 28	.....	4 58	.....	.....	5 50	3 60	20 15	26 39	69 50	14
52 40	2 00	.....	2 20	3 95	2 05	.....	.....	1 50	40 70	52 40	15
55 80	2 50	10 00	5 97	2 10	.....	.....	.....	6 00	29 23	55 80	16
26 75	1 50	5 00	1 61	.....	.....	.....	.....	28	18 36	26 75	17
58 90	10 35	25 28	4 25	25	.....	16 00	.....	2 50	27	58 90	18
3 75	.....	.....	29	.....	.....	.....	.....	.....	3 46	3 75	19
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20
75 82	17 15	.....	3 74	4 75	.....	12 30	.....	5 00	32 88	75 82	21
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22
5 75	.....	.....	51	.....	.....	.....	.....	.....	5 24	5 75	23
4 00	.....	.....	40	.....	.....	.....	.....	.....	3 60	4 00	24
5 00	.....	.....	3 02	.....	.....	.....	.....	.....	1 98	5 00	25
24 50	1 30	10 00	83	.....	3 40	.....	.....	.....	8 97	24 50	26
10 00	1 18	.....	2 76	1 50	.....	.....	.....	.....	4 56	10 00	27
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28
61 75	9 35	10 00	4 15	.....	.....	2 35	7 35	.....	28 55	61 75	29
85 38	.....	20 00	12 80	.....	.....	23 37	11 15	.....	18 06	85 38	30
3 25	.....	.....	20	.....	.....	3 00	.....	.....	05	3 20	31
25 49	11 50	.....	1 30	1 00	2 25	.....	1 65	.....	7 79	25 49	32
51 10	17 05	.....	3 03	.....	.....	4 20	.....	.....	26 82	51 10	33
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	34
9 00	4 00	.....	1 20	2 50	.....	.....	.....	.....	1 30	9 00	35
14 75	.....	.....	50	.....	.....	.....	.....	.....	14 25	14 75	36
32 50	6 75	.....	1 55	.....	50	.....	.....	1 50	22 20	32 50	37
53 88	11 20	.....	2 45	75	2 90	.....	9 70	.....	26 88	53 88	38
8 50	.....	.....	1 00	1 50	.....	.....	.....	50	5 50	8 50	39
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40
60 90	10 50	5 00	9 44	1 50	.....	2 00	1 90	21 02	9 54	60 90	41
54 50	13 36	.....	4 35	2 65	.....	10 40	3 41	1 80	18 53	54 50	42
29 00	2 00	.....	1 60	1 50	.....	5 00	.....	2 96	15 94	29 00	43
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

WOMEN'S INSTITUTES OF ONTARIO.

OFFICERS FOR 1902.

SUPERINTENDENT, G. C. CREELMAN, PARLIAMENT BUILDINGS, TORONTO.

INSTITUTE.	MEMBERSHIP, 1902.		NAME.	P.O. ADDRESS.
Amherst Island.	54	President	Mrs. R. D. McDonald	Emerald.
		Vice-Pres.	Mrs. Wm. Allen	Stella.
		Sec.-Treas.	Mrs. S. K. Tugwell	"
Brant, S.	58	President	Mrs. J. E. Brethour	Burford.
		Vice-Pres.	Mrs. F. M. Lewis	"
		Sec.-Treas.	Miss M. Lewis	"
Bruce, C.	80	President	Mrs. Donald McIntyre	Paisley.
		Vice-Pres.	Mrs. R. Conn	"
		Sec.-Treas.	Mrs. J. C. Seymour	"
Bruce, W.	86	President	Mrs. D. McTavish	North Bruce.
		Vice-Pres.	Mrs. C. Nicholson	Port Elgin.
		Sec.-Treas.	Miss M. J. Elliott	"
Bruce, S.	119	President	Miss Jean Rowand	Walkerton.
		Vice-Pres.	Miss B. McLennan	"
		Sec.-Treas.	Miss Bessie Tolton	"
Dufferin.	70	President	Mrs. J. S. Hunter	Shelburne.
		Vice-Pres.	Mrs. Wm. Shields	"
		Sec.-Treas	Mrs. W. J. Craven	"
Durham, E.	191 Hon.	President	Mrs. W. T. Allen	Millbrook.
		President	Miss Ada Richardson	Bethany.
		Vice-Pres.	Mrs. M. S. Fair	South Monaghan.
		Sec.-Treas.	Mrs. John Mulligan	Millbrook.
Durham, W.	20	President	Mrs. W. L. Law	Solina.
		Vice-Pres.	Mrs. G. C. Haines	Bowmanville.
		Sec.-Treas.	Miss E. E. Haycraft	"
Elgin, E.	58	President	Mrs. Thos. Hammond	Aylmer.
		Vice-Pres.	Mrs. L. A Brown	"
		Sec.-Treas.	Mrs. I. R. Prichard	Springfield.
Grey, C.	13	President	Mrs. C. Knott	Kimberley.
		Vice-Pres.	Mrs. J. H. Magee	"
		Sec.-Treas.	Mrs. S. S. Barrett	"
Grey, N.	58	President	Mrs. James Gardner	Kemble.
		Vice-Pres.	Mrs. D. Davidson	"
		Secretary	Mrs. Wm. McGregor	"
		Treasurer	Mrs. Geo. Beckett	"
Grey, S.	37	President	Mrs. Thos. McGirr	Durham.
		Vice-Pres.	Miss Minnie Brown	Holstein.
		Sec.-Treas.	Miss Kate L. Dixon	Dromore.
Halton.	227	President	Mrs. J. S. Deacon	Milton.
		Vice-Pres.	Mrs. Dr. Robertson	"
		Sec.-Treas.	Mrs. F. C. Willmott	"

Hastings, E.	169	President	Mrs. J. L. Clapp	Corbyville.
		Vice-Pres.	Mrs. F. W. Fairman	Melrose.
		Sec.-Treas.....	Miss Mary A. Hanley	Read.
Hastings, N.	80	President	Mrs. R. S. Allen	Cooper.
		Vice-Pres.	Mrs. Geo. W. Smith	Rimington.
		Sec.-Treas.....	Miss Mary Foster.....	Moira.
Hastings, W.	120	President	Mrs. S. Lane.....	Wallbridge.
		Vice-Pres.	Mrs. W. R. Vandervoort...	Sidney Crossing.
		Sec.-Treas.....	Miss C. Spafford.....	"
Huron, E.	71	President	Mrs. Acheson Laird.	Gorrie.
		Vice-Pres.	Mrs. J. L. Wilson	"
		Sec.-Treas.....	Mrs. James Armstrong	"
Huron, W.	97	President	Miss M. L. Green	Loyal.
		Vice-Pres.	Mrs. Henry Morris	"
		Sec.-Treas.....	Mrs. Colin Campbell	Goderich.
Kent, W.	19	President	Mrs. Isaac R. Hodgson....	Wheatley.
		Vice-Pres.	Mrs. Wm. Wemp	"
		Sec.-Treas.....	Miss Maggie Mills	"
Lennox.	20	President	Mrs. Duffett	Adolphustown.
		Vice Pres.	Mrs. Thos. R. Denyes.....	"
		Sec.-Treas.....	Miss Bertie Roblin.....	"
Lincoln.	162	President	Mrs. S. N. Fry	Jordan.
		Vice-Pres.	Mrs. E. Staff.....	"
		Sec.-Treas.....	Mrs. E. W. Fry	Vineland.
Middlesex, E.	9	President	Miss A. Charlton	Ilderton.
		Vice-Pres.	Mrs. Wm. Frith	"
		Sec.-Treas.....	Miss Addie Patrick	"
Middlesex, W.	50	President	Miss M. V. Henderson....	Strathroy.
		Vice Pres.	Mrs. J. Bogue	"
		Sec.-Treas.....	Miss May E. Healy	"
Monck.	29	President	Mrs. Angus Campbell.....	Marshville.
		Vice Pres.	Mrs. Benj. Campbell.....	"
		Sec.-Treas.....	Mrs. A. B. McLean.....	"
Muskoka, S.	19	President	Mrs. Henry Speedie	Muskoka Falls.
		Vice-Pres. ...	Miss Lizzie Donnelly.....	Bardsville.
		Sec.-Treas.....	Miss A. Hollingsworth	Beatrice.
Northumberland, E.	61	President	Mrs. W. H. Dempsey	Trenton.
		Vice-Pres.	Mrs. W. W. Farley	Smithfield.
		Sec.-Treas.....	Mrs. J. W. Crews.....	Trenton.
Northumberland, W.	69	President	Mrs. E. B. Hinman.....	Grafton.
		Vice-Pres.....	Mrs. James Dickson	Cobourg.
		Sec.-Treas. ...	Mrs. James Davidson	Camborne.
Norfolk, N.	15	President	Mrs. Wilson Smith	Waterford.
		Vice-Pres.	Mrs. S. Culver	"
		Sec.-Treas.....	Mrs. Safford Kitchen.....	"
Ontario, N.	63	President	Mrs. D. Ferguson	Uxbridge.
		Vice-Pres.	Mrs. W. Lapp.....	"
		"	Mrs. Wm. Ferguson	"
		Sec.-Treas.....	Mrs. C. S. Goodrich.....	"

Ontario, S.	96	President	Mrs. J. L. Smith	Whitby.
		Vice-Pres.	Mrs. Wm. Purves	Columbus.
		"	Mrs. R. R. Mowbray	Kinsale.
		"	Mrs. T. J. Holliday	Brooklin.
		Secretary	Miss Louie Lick	Oshawa.
		Treasurer	Miss M. A. Hart	Foley.
Oxford, N.	18	President	Mrs. Convey	Princeton.
		Vice-Pres.	Mrs. E. H. Elmes	"
		Sec.-Treas.	Mrs. F. Vickert	"
Peterboro', W.	50	President	Mrs. R. Graham	Lakefield.
		Vice-Pres.	Mrs. Gale	"
		Sec.-Treas.	Mrs. H. Fitzgerald	"
Peel.	110	President	Mrs. Geo. McClure	Brampton.
		Vice-Pres.	Mrs. W. W. Wilkinson	Cheltenham.
		Sec.-Treas.	Mrs. W. J. Hunter	Brampton.
Simcoe, C.	21	President	Mrs. Wm. Pratt	Penetang.
		Vice Pres.	Mrs. Chas. Rankin	Wyebridge.
		Sec.-Treas.	Mrs. J. Champion	Randolph.
Simcoe, S.	66	President	Mrs. J. J. D. Banting	Cookstown.
		Vice-Pres.	Miss E. Cooke	"
		"	Miss O. Lewis	"
		Sec.-Treas.	Miss Christina Sutherland	"
Simcoe, W.	29	President	Mrs. C. McGregor	Duntroon.
		Vice-Pres.	Mrs. Wm. Ovens	"
		Sec.-Treas	Miss May Hewson	"
Union.	61	President	Mrs. W. S. Smith	Clifford.
		Vice Pres.	Mrs. Isaac Bayliss	"
		Sec.-Treas.	Miss Mabel S. Fraser	"
Victoria, E.	106	President	Mrs. Wm. Fell	Bury's Green.
		Vice Pres.	Mrs. R. Murdock	Bobcaygeon.
		Sec.-Treas.	Miss E. R. Cullis	Powle's Corners.
Waterloo, N.	33	President	Mrs. Andrew Brown, Sr	Winterbourne.
		Vice-Pres.	Mrs. W. Veitch	"
		Sec.-Treas.	Miss Jessie McDougall	"
Welland.	50	President	Mrs. Medler	Ridgeway.
		Vice-Pres.	Miss Anna McLeod	"
		Sec.-Treas.	Mrs. Ed. Cauthard	"
Wentworth, S.	119	President	Mrs. J. H. McNeilly	Stoney Creek.
		Vice-Pres.	Mrs. Erland Lee	"
		"	Mrs. J. Lottridge	"
		Sec.-Treas.	Miss M. E. Nash	"
York, E.	125	President	Mrs. R. Forfar	Ellesmere.
		Vice-Pres.	Mrs. D. James	Thornhill.
		"	Mrs. T. Rainey.	Box Grove.
		Sec.-Treas	Miss Lulu Reynolds	Scarboro' Junct.
York, W.	73	President	Mrs. A. Cruickshank	Weston.
		Vice-Pres.	Mrs. A. Fraser	"
		"	Mrs. R. Wardlaw	"
		Sec.-Treas	Miss H. Grubbe	"

WOMEN'S INSTITUTES.

REPORT OF THE SUPERINTENDENT.

Last year we reported that thirty-three Institutes had been formed, with a membership of 1602, and a total attendance at the meetings of 3,500 women. This year shows an enormous increase. The total paidup membership for the year ending June, 1902 is 3,081. 336 Meetings were held, at which 617 papers were read or addresses delivered, to audiences aggregating 16,410 women.

It will thus be seen that the delegates sent out by the Department are helping a large number of the wives and daughters of our farmers, and it is hoped that the good work started in this way will be carried on by the women of the Province to the upbuilding and betterment of many of our farm homes.

Institute Notes.

One pleasing feature of our Institute work is that in almost every place visited by one of our lady speakers a Women's Institute has been organized. There seems to be a general movement throughout our country districts toward the amelioration of women's work on the farm. Improvements in methods of housekeeping have not kept pace with the introduction of improved machinery on the farm, and the farmers' wives and daughters are beginning to realize that the time has come when the kitchens at least must be remodelled and many appliances and conveniences added. We have this year seven lady speakers in the field and they all write encouragingly of the work.

Amherst Island. Mrs. S.K. Tugwell writes that the first meeting of the year was well attended and that the interest is keeping up splendidly. Miss E. Fleming a member of the Institute, discussed the subject of "Economy in Cooking" and Mrs. Allen read an excellent paper on "Dust and its Dangers." Both subjects were well discussed and the members are looking forward to the regular Institute meetings and a visit from Mrs. Torrance this month.

Bruce South. The energetic secretary of this Institute, Miss Tolton, Walkerton, writes that on the 9th of January they had a meeting in Walkerton at which Mrs. Colin Campbell, Goderich, was the principal speaker. Miss Tolton says that Mrs. Campbell made a splendid impression and enabled them to secure many new members, as well as renewals of last year's membership. At the afternoon meeting Mrs. Campbell spoke on "Household Economics," when there was an attendance of 60 ladies. At the evening meeting, which was a union meeting of Women's and Farmers' Institutes there were over 700 people present.

Durham East. This Institute was organized last year and this season the ladies have taken advantage of the fact that a lady was on the delegation of both regular and supplementary meetings, and arranged separate meetings in the afternoons and thus advanced the work of their organization. Mrs. John Mulligan, the secretary, reports an attendance of twenty-one ladies at the afternoon meeting at Garden Hill on January 11th, and twenty-eight at South Monaghan the next day. Mrs. Mulligan says, "We have no trouble this year in getting members and will form branches at Garden Hill, Bethany and South Monaghan. All three of these places are anxious to have practical demonstrations, and we are making arrangements to have one of your speakers come back to us later for that purpose. The ladies are particularly interested in Miss Linton's demonstrations, and even some of the men attended our special meetings and helped us by their presence and sympathy."

North Grey.—Mrs. Wm. McGregor, secretary of this Institute, succeeded last year in securing the largest membership in the province. In reporting the meeting at Kemble on

January 7th, Mrs. McGregor writes: "At this meeting we secured 38 new members. It was decided that we hold a meeting here at least once in three months, and that we further make arrangements to exchange papers and essays with other institutes so that in this way we may be mutually helpful. Some of the subjects discussed were 'House Sanitation,' 'Poultry,' 'Special Occasions' and 'Success in Life.'"

Halton.—The regular monthly meeting of this Women's Institute was held at Milton on January 14th, there being 50 ladies present. Miss McGregor of Milton prepared an excellent paper on "The Work of the Country Home." This was thoroughly discussed by the ladies present, after which a business session was held and arrangements made for the next meeting.

Hastings, West.—Miss C. Spafford, Sidney Crossing, reports meetings held at Gilbert's School House, Turner's School House, Glen Ross School House and Harder's School House, on the 7th, 8th, 9th and 10th of January. At these meetings there were 112 ladies present at the afternoon gatherings and 900 at the evening meetings. Mrs. Elizabeth Torrance of Chateauguay Basin gave a practical demonstration in cooking at the afternoon meeting and in the evening discussed "Housekeeping as a Business" and "The Object of True Education."

Lincoln.—The secretary, Mrs. E. W. Fry, Vineland, writes that they had a most interesting meeting at Campden on the 13th inst. Miss Maddock, one of the regular delegates to the Farmers' Institutes, addressed a separate meeting of ladies in the afternoon, at which 90 ladies were present. This gave the local officers very much encouragement. Miss Maddock gave her talk on "Bread Making." Mrs. Staff, of Jordan, gave a paper on "Celery Culture," after which Miss Maddock took up the subject of the "Home Dairy," which occupied the rest of the afternoon. Good practical discussions were brought out by the papers presented and the Campden ladies went away more than pleased with the work of the Women's Institute in that district.

At Queenston the next day Miss Maddock again spoke on "Dairying" at the afternoon meeting, to a mixed audience. Many questions were asked and it was necessary to stop discussion in order to hear the other speakers who were advertised for the meeting. It is Miss Maddock's opinion that a good branch might be formed at St. David's and the ladies of that district are agitating the subject.

Union.—Union is a part of West Wellington Farmers' Institute and the women there have organized and are having good meetings. Miss Munro, the secretary, writes on January 14th, enclosing a list of 52 members for 1902. Miss Munro also reports successful meetings at Lakelet, with 225 present and 475 at the meeting held at Clifford. Mrs. Colin Campbell, of Goderich, was the principal speaker, her subjects being "Aims and Objects of Women's Institutes," "Home Economics," "Bread Making" and "Home Influence." The Secretary writes that Mrs. Campbell evolved some excellent ideas and good discussions followed her addresses. "We had instrumental music at each meeting and we feel that our Institute is on a good footing and on the high road to prosperity."

Wentworth, South.—Here, at the home of the Women's Institute, a good meeting is always expected and Miss Nash reports an unusually good attendance, when Miss Maddock addressed the ladies on the subject of "Bacteria as they affect the Home, the Soil and the Dairy," this being followed by discussion. Mrs. Gorman, of Stoney Creek, then introduced the subjects of foods, the discussion on which lasted until the time for adjournment. At the close of the meeting an invitation was sent to the members of the Farmers' Institute, who were meeting in a separate hall, to come over to the hall where the ladies were meeting, where a pleasant surprise awaited the visitors in the shape of supper, which it is not necessary to say, was enjoyed by both Institutes. In the evening a joint meeting was held, when Major Shep-

pard gave an address on "How to Keep Down Obnoxious Weeds," Mr. E. D. Smith a talk on the "Possibilities of the Fruit Trade," also an address by Mr. J. B. Davis, on the "Transportation of Fruits." The meeting was made most instructive and demonstrated the fact that it is not necessary to provide frivolous entertainment at an Institute meeting.

Mrs. Elizabeth Torrance, of Chateauguay Basin, Que., was on the regular Farmers' Institute delegation in the counties of Hastings, Lennox, Frontenac, Leeds and Addington. She reports many good meetings, and some at which there was not much interest manifested in her work. She writes to say, that most of the work done was of a very practical nature, and after all that seems to be what is needed. Those who attended the demonstrations seemed to realize that the plainest home work could be made interesting and even a pleasure if system were introduced so as to save many steps.

"I was much pleased at Adolphustown," writes Mrs. Torrance, "to have one woman tell me that she had driven twelve miles to the meeting, and that her mother had driven almost as far to keep house for her while she was away. The mother had been at one of our meetings the day before and was so interested that she insisted on her daughter taking this long drive to attend the Adolphustown meeting. Where possible we have visited the schools in the morning and have tried to interest the children in home work. On the whole, we have had a fine trip and I hope much good will result therefrom."

Letters from Officers.

Wishing to ascertain how the newly appointed officers of the Women's Institutes were taking hold of the work, and whether the members appreciated what was being done, we wrote to the Secretaries asking that they write us a short letter, telling just how the members expressed themselves regarding the Institute, and relating any particular benefits which they felt they had received from the organization. We have pleasure in printing immediately following the various replies received in response to our circular letter. These letters will give the reader an idea of the work that is being done and will afford an opportunity to the different Women's Institute workers and officers of seeing how the work is viewed in the different sections of the Province.

Amherst Island (Mrs. S K. Tugwell, Secretary.)

"I think our Women's Institute has done us good in many ways. Our monthly meetings afford an opportunity for us to meet our friends and neighbors, which would not be possible otherwise. At these meetings we exchange ideas about our work, and how to do it in the best and easiest way. Our talks on bread, pie, cake, etc. have been most interesting, and we are keeping the best recipes which we intend to make into a book sometime. We also have some cheerful reading or recitation when we can, and altogether have a pleasant and profitable time, which makes us forget our cares and work at home, and when we go back with some helpful ideas for our work it makes it more attractive and less of a burden."

Brant, South, (Mrs. J. E. Brethour, President.)

"The benefits attending the Institute are varied and various, among which are the exchanging of ideas and learning how to do common every-day duties in a simple manner, enabling us to economize in the most precious commodity we possess, viz. time. We are also enabled to learn the reason why we do certain things, and the doing of them from a scientific standpoint. We are also taken "out of ourselves" and our lives broadened, thus beautifying the "common round," to say nothing of the foundation of pleasant friendships."

Bruce, Centre, (Mrs. J. C. Seymour, Secretary.)

"One member has helped in making healthful and nutritious desserts for dinner; another extolled the beneficial effects of the organization in our household duties; others have told of

the benefits and educative privileges and of the helpfulness in listening to the papers read, and all have realized the benefit of the social side of the meetings. Helpful suggestions were given by one member on "House Plants," and this proved to be helpful to some of our members, as was also the discussion on making hens lay. A visitor from Stratford had never attended a meeting of this kind before, but was much pleased and impressed with our Institute meeting, and suggested that if our daughters would take an interest in these meetings the young men of the county would not be so afraid to marry."

Bruce, West, (Mrs. J.H. Wismer, Secretary.)

"This is an association which brings together ruralites and townspeople, and the meetings have a tendency to unite, socially, these two classes. Interchange of ideas and practical experiences in domestic work of every kind, have been very helpful. Members who take active part have a feeling of satisfaction in knowing that their suggestions, papers and addresses are appreciated and will help others. The "Question Drawer" is perhaps the most valuable feature, eliciting answers, and recipes alone worth many times the membership fee. Many other beneficial features might be mentioned, and one of the best evidences of the good we get is shown in the fact that few members care to miss any of the meetings."

Dufferin, (Mrs. W. J. Craven, Secretary.)

"Our Institute was only recently organized, and there has not been very much time to see the benefits derived therefrom. The members are interested, and by the end of the year I hope there will be a great deal of good accomplished from the meetings. The meeting together will give the members some new ideas, and fill their minds with new thoughts, which cannot fail to help relieve the drudgery and monotony of work which is done mechanically. Farmers' wives, as a rule, stay at home too closely, and country people are not nearly as sociable as they ought to be, and I believe the Institute will be the means of overcoming this defect to a great extent. When one meeting is over the members seem to be looking forward to the next with a great deal of interest."

Durham, East. (Mrs. John Mulligan, Secretary.)

"The Institute members have received many benefits from the organization during the past year, among which are the following :—

(1) Useful lessons learned from the use of the separator, giving us pure and clean milk and butter.

(2) How to choose a good dairy cow ; the cause of cream not coming to butter.

(3) How to care for and feed chickens.

(4) The lessons learned from cooking lessons on the value of eggs, milk, grains, onions, tomatoes, both as to food value and simple methods of preparing same.

(5) Lessons by a trained cook on meats, soups, sauces, salads, creams, jellies, invalid cooking, cakes, etc.

(6) Much interest is shown in the horticultural line, the members learning how to grow plants, and how to get rid of insects which attack the leaves, roots, etc."

Elgin, East, (Mrs. I. R. Prichard, Secretary.)

"The women of our riding enjoy the Institute meetings very much, because they are brought together to hear discussed questions which are of interest to them. Some say they cannot miss a meeting, for if they do they will be the losers. It gives them a confidence in themselves in taking part in the discussion, so that they forget to be afraid of the sound of their own voices. We find that on the oldest questions and subjects many new ideas and plans are suggested which prove of help to some present."

Grey, Centre, (Mrs. S. S. Burritt, Secretary.)

"We consider our meetings a benefit in a number of ways, as we discuss most everything that has to do with the home, such as dairying, poultry, gardening, preserving, pickling, etc. We intend to hold monthly meetings, and after the busy season to organize Branch Institutes."

Grey, North, (Mrs. Wm. McGregor, Secretary.)

"Our Institute has been a benefit to our women in stimulating a greater desire for home study and mutual improvement. It removes the idea that our education ends with our school days. The Institute affords many advantages of developing unthought-of capabilities, and gives the members a chance to tell others what experience has taught them. A special benefit of our Institute is its friendly side, bringing about the old-time sociability among an industrious class who have few advantages. We fully realize that an afternoon spent at the Institute is much more profitable and pleasant than an afternoon's visiting, by removing any spirit of contention or jealousy and substituting a higher aim—the building up of a perfect home, which is the basis of national greatness."

Grey, South, (Miss Kate L. Dixon, Secretary.)

"The Institute meetings are very helpful to all who attend regularly, especially the farmers' wives, who are usually too closely confined to their home duties. By spending, say one afternoon every month in taking a drive to the Institute meeting the farmer's wife is greatly refreshed and benefited. By the exchange of thoughts and ideas she acquires better methods of managing the home and of doing her work. Then, by taking part in the meeting, and preparing a paper her mind is broadened and she becomes more interested in literature, especially that which pertains to the home and its surroundings."

Halton, (Mrs. J. C. Willmott, Secretary.)

"Our Women's Institute has been of immense educational value, as it is teaching the women to ask themselves the question why they do this or that, and to look for better ways and means of accomplishing their work, instead of doing it in the old-fashioned hap-hazard way. It is making a pleasure of work that was before a monotonous drudgery. It has been the means of mutual improvement by interchange of thought and the introduction of new ideas which widen one's sphere of usefulness. The demonstrations in cooking have been much appreciated by all."

Hastings, East, (Miss Mary A. Hanley, Secretary.)

"Since the date of the organization of our Institute the circle of interest has been gradually widening. Regular meetings have been held at seven different points in the riding. How these meetings were valued and how anxious our East Hastings women are to welcome a movement for the betterment of our homes and individual life work, is best shown by the membership list which has grown to 158 persons. The talks on food values and cooking demonstrations, given by two of the Institute delegates, were very helpful to our members, and were much appreciated."

Hastings, West, (Miss C. Spafford, Secretary.)

"The members of our Institute have derived much benefit from the organization, which is shown by the increasing attendance and also of the membership roll. First, it is promoting more sociability among the farmers' wives and getting them to impart to each other that which they have found to be better and less laborious methods of work. For instance we have discussed "Bread Making," contrasting the lightning process with the old slow way. Then we have learned of many new and dainty dishes, by the cooking demonstrations which our delegates have given us, and also the exchanging of recipes, which is becoming customary among our members. The literature also has been most instructive. What we have learned

has given us a greater interest in our every day work, and a desire to learn more about it, and to consider it more as a science than a drudgery."

Huron, East, (Mrs. James Armstrong, Secretary.)

"Many of our members have expressed themselves as receiving much benefit from the meetings, not only from the practical nature of the papers read and the advantages gained from the discussions about our various household duties, or the social intercourses, but also the educational advantages gained in regard to conducting our business on business principles. The women also express themselves as gaining much benefit from the literature sent out by the Department of Agriculture. All our members are satisfied with the success we have met with since the organization last January. All appear to have a personal interest in the Institute."

Huron, West, (Mrs. Colin Campbell, Secretary.)

"Each Branch of the Institute meets once a month at the homes of the members, and the membership is composed mostly of farmers' wives and daughters, some of whom come a distance of eight or ten miles. One of the strongest proofs that we have that the Institute is a benefit to those who attend, is the demand for meetings We have received much benefit from the knowledge gained of the properties of food, sanitation, household economy, and the informal talks upon the work that pertains to the special season of the year. The social half hour, after the more formal part of the meeting, is enjoyed by all."

Kent, West, (Miss Maggie Mills, Secretary.)

"It would be impossible for me to give a list of the benefits to be derived from Women's Institutes, they are so numerous. However, we have all found better, easier and more thorough ways of doing our housework, and all that pertains to home life. We also find in a benefit socially, for we meet with some with whom we would never come in contact otherwise, and by taking part in the discussions we acquire the way of talking in public without being nervous and timid."

Muskoka, South, (Miss A Hollingworth, Secretary.)

"The chief benefit we derive from attending the Institute is in the discussions, when each one tells what she has learned by practical experience. Those who say, 'why go to the meetings when I can read these things at home in magazines?', forget that a writer is limited to space and must necessarily omit many side issues, which are often what are most desired by those who are familiar with the main points of the subject. To question a speaker is certainly more satisfactory than to put down the magazine with the question unanswered. Then there is the mental quickening—the power to express our thoughts more freely and forcibly, which comes only with practice. Those who prepare essays reap an additional benefit from the fact that they read more and have the information more deeply impressed on the mind. I believe our meetings have been a source of pleasure and profit to all who have attended.

Northumberland, East, (Mrs. J. Wellington Crews, Secretary.)

"We have found great pleasure in meeting in the homes of the different members to discuss different methods of housekeeping and home topics in general. One great advantage of the Institute is in bringing people together, so that they may become better acquainted with one another. This is a great privilege. There are neighbors of mine whom I have known by sight nearly all my life, with whom I had never become personally acquainted until after the organization of our Women's Institute. Some excellent addresses and cooking demonstrations have been given by outside talent, and a number of good papers by members of our own organization."

NORTHUMBERLAND, WEST, (Mrs. James Davidson, Secretary.)

"From the papers and discussions at our Institute meetings our members have received Much valuable information on various subjects pertaining to home life and work. But perhaps greater benefits than these have been derived from friendly intercourse with one another, in extending our acquaintance and in giving us broader views of life. We have also an opportunity to informally discuss many matters of interest, which are easy to discuss in a social way, but rather difficult to put on paper."

ONTARIO, NORTH, (Mrs. C. S. Goodrich, Secretary.)

"The benefits of our Institute have been many, among the foremost of which I might name sociability, many families having become better acquainted through meeting each other at our meetings. All agree that they have learned a great deal from the different papers that have been given and the discussions following same. We have had very interesting papers on Bread Making, Butter Making, Nursing the Sick, Household Science, etc.—all good, practical subjects. The meetings each month have been well attended."

ONTARIO, SOUTH, (Miss Lulu Lick, Secretary.)

"Our members generally express themselves as being benefited in many ways by the Institute, notably in the various branches of Domestic Science, Dairying and Poultry Raising. We have added to our knowledge of these subjects not only from the papers given, but by the discussions which follow, when we have an interchange of ideas upon all subjects. Our library—including the magazines—has been a valuable aid in our work, and not least in the list of benefits has been the social intercourse enjoyed and the broader outlook and higher aims, resulting from general efforts to share our best with those around us."

PEEL, (Mrs. W. J. Hunter, Secretary.)

"The following are some of the benefits we have received from the Institute during the past year :—

1st. The fact of being banded together in this work has broadened our ideas, and made us more liberal and tolerant of the methods of others.

2nd. Many useful hints on cooking and everything pertaining to the household have been interchanged.

3rd. The importance of women's every-day work has been given a prominence in our minds never before thought of, with the result of added interest in our work.

4th. Coming together in these meetings, often from distant points, the women of our country become better acquainted, and are thus more sociable.

5th. Our local Farmers' Institute and our own Institute feel mutually helped by working together, as the interested husband brings his wife along and vice-versa."

SIMCOE SOUTH, (Miss Christina Sutherland, Secretary.)

"The success of our Institute, since the organization about a year ago, has been more than we expected. The members have found the meetings both interesting and instructive. The meetings have been addressed by outside, as well as home talent. We are much encouraged by the work of the first year, and are looking forward to greater things in the future."

VICTORIA, EAST, (Miss E. R. Cullis, Secretary.)

"With the present scarcity of help, any plan which tends to lighten labor of housework, without sacrificing the comfort of the household, is thankfully received, and this is one of the reasons the Women's Institute has been so successful. The papers given at the meetings, dealing with household problems, and followed by a free discussion, have been very helpful. One member's directions for washing woolens without shrinking has been a boon to many. The Institute is helpful, if only for the social side. The average woman spends too much time in her kitchen. One member said her mind was rusting for lack of use in anything but her

regular routine work, and the Institute has been just the thing to help her in this direction. The Institute has fostered a much friendlier feeling between town and country women."

Waterloo, North, (Miss Jessie McDougal, Secretary.)

"In the short time our Institute has been organized we have found it a great benefit socially, being the only meeting in the community which enables *all* the women to come together with a common interest, and to become well acquainted with one another. This is a special boon to newcomers in the district. It has developed the executive ability of those in charge, and we have found it to be just what the busy women in the country need to encourage them in their rather isolated homes, teaching them to be more capable and broad-minded, through the knowledge gained from others, and also to be self-reliant, though their endeavor to give in public the benefit of their experience in various methods of work."

Wentworth, South, (Miss M. E. Nash, Secretary.)

"The past year has been one of much prosperity. The regular meetings have been very helpful to those attending. The demonstrations in cooking might be specially mentioned as being a great benefit to the members. Many new ideas and suggestions were given. The programmes at our meetings cover a variety of subjects, all of which are of a practical or entertaining character."

York, West, (Miss M. V. Mather, Secretary.)

"Although our Institute has been in existence but one year it has grown rapidly. The members feel that they have been benefited in many ways by attending these meetings. Housekeepers, as a general rule, have not enough variety in their lives, and the same continual round of duties grows monotonous. By attending the Institute meetings new ideas and suggestions are received, and consequently there is more variety and interest in the home duties. The demonstrations in cooking, and talks on foods, have been very helpful, and we have learned not only how but why to do certain things. The Institute meetings have a broadening and enlightening influence on all who attend and take an active interest in them."

York, East, (Miss Lulu Reynolds, Secretary.)

"Probably one of the benefits of our Women's Institute is in drawing all classes and denominations together. The social side of the Institute is a very important part. I think a great number of our members are benefited as much in that way as they are in the educational line. The educational part of it cannot be too highly estimated. Although I hear some of the members say the meetings are not good—they are not the ones who try to make them better—yet they confess they have picked up hints by the score, which have been thrown out by one and another at the meetings. Foods are cooked to be much more nourishing, and houses are ventilated better, besides other things too numerous to mention. We cannot expect to jump to perfection in anything, the work must be gradual."

WHAT IS THE GOOD OF GOING TO THE INSTITUTE?

By Mrs. James Gardner, Kemble.

Men and women often ask the question—"What is the good of going to the Institute"? They ask the question with varying motives and different spirits, but in nearly every case an honest doubt is expressed.

I think it is a good thing to be connected with any organization whose chief object is for the mutual improvement of our homes and families. At the meetings of the Women's Institute all subjects for the uplifting of the homes and bettering of housekeeping-methods are discussed. The last report says that the Farmers' Institute has been of more benefit to the farming communi-

ties than any organization that has been introduced. The Women's Institute promises to even surpass it as it has a wider scope than the men's ; because it is not confined to the farm alone, but deals with a higher subject. It is said where ever there is a home with a woman in it, there is work for the Institute. The women are beginning to realize that they need instruction in proper methods as well as their husbands.

It is remarkable how rapidly the movement has grown and with what sympathy and approval it has been accepted It first began in 1897, and we have the honour of being looked upon as one of the pioneer Institutes, being the third one in the province in which there are now forty-three with a membership of over 3,000. Last year 5,300 women attended the meetings of the Women's Institute.

We go to the Institute because it is good to meet together in frequent, friendly relations with one another. Our Creator has made us social creatures, to be developed through human society. Social life is one of the main factors in establishing a nation's ideals. It has a great influence on the school or the church. The most irresistable force in nature is the mutual touch in human life. 'Tis said "The homes of a nation are its strongest forts." The real pride and strength of a nation is not all in the wisdom of her law-makers ; be they ever so great, but in the honesty, industry and contentment of its people, and the ideal home comes nearest realization in the well-ordered farm home.

One thing that Canada needs to-day is, that more of her sons and daughters of ability should turn their attention to agriculture, and cease to strive and struggle to live upon the allowance of daily wages paid in town and city offices. Agriculture is the greatest among the arts for it is the first in supplying our necessities.

Some say—"What good can I do going to the Institute"? Women ought to attend the Institute because they are brought together more there than in any place else, face to face with the practical side of life. Narrow minds depend upon luck ; strong wills look for cause and effect. We grow queer and odd when we draw ourselves in, and become suspicious and develop a tendency towards prying gossip. We often get morbid, brooding over supposed misfortune or ill treatment. Our characters even, spoil if we are shut up ; we get so narrow when we live only to ourselves. To women more than men is there a danger of becoming narrow. Women lacking breadth are said to betray by their conversation minds of narrow compass. They have not the opportunity that men have of meeting together and discussing matters outside the routine of their daily lives. The conversation of the average farmer's wife is butter and eggs, ailments, children and clothes. By earnest toil and endeavor we may cultivate any part of our nature. We can make ourselves new men and women, by giving attention to our business and pleasure. Our business becomes dull if we do not fix our minds upon it and try to make it interesting, and the latter is one of the benefits of an Institute. It instils new life and more interest for the farmer's wife ; it takes away the humdrum, treadmill-round that some are apt to follow. It is a matter of wonder how some women go on for ever doing the same things in the same slow, slovenly way as though unaware that the rest of the world is moving steadily forward, leaving them far behind in the race towards success and happiness.

The question was asked at one of our meetings—"Is housekeeping a drudgery?" The reply was : "Housekeeping like everything else is a pleasure or a drudgery just according to the amount of brain and energy we put into the work." I always feel sorry for a woman and her family when I hear her say, "Oh do not ask me to go to the Institute, I hate farming, I cannot bear it, I know too much about it now." I doubt if we know too much already, I think that that is where the trouble lies. But it is the custom of some shallow minds to snear at farmers and farm life. Why should any woman despise the work of the home? We should not be ashamed of anything unless it is poor work. We have been too

apt to speak slightingly of all work connected with our homes, and any agency which will add to the dignity, increase its pleasures and make it more attractive is to be commended.

Men and women are made for activity, business and employment. Activity is the life of us all. Those who have no occupation are in a bad plight. The man or woman who has no business and nothing to do is an absolute pest to society.

Those occupations requiring manual labor are the surest, most healthful and most independent. Be what nature intended us for and we shall succeed. It is not accident that helps us along in the world but patience and persistent industry. Only by patient and persistent industry can an effort of any kind be developed into really useful and honourable achievements. Any one who looks for a short cut to perfection in any art or industry, is in a poor way to succeed.

We go to the Institute to strengthen our love and enthusiasm for the occupation we are endeavoring to follow, and our success largely depends upon the interest, perseverance and understanding we have. There we learn what is most essential to success ; we learn economy, patience and industry. There we may hear of the success or failures in the experiments of others. Whatever may be the plan that we have always followed, there is probably a much better one and we should not be slow to accept suggestions or to follow the example of a neighbor, when by so doing we might lighten our labors and increase our pleasures. We have to advance and change our ways of management. We are living under different conditions to those existing fifty or sixty years ago. The tallow candle, the fire place and the dash churn are things of the past. Who ever heard of hatching chickens with incubators in those days? The cream separator was not then thought of. From four to six cows was the average number and hired help was not so hard to procure. Now not one family in ten can get hired help in the house. But we are learning to manage better and how we may accomplish more so that the best possible labor may fill each and every hour, and also to take better care of our health. Hard work does not break down our women like imprudence and waste of strength. It is said that much was accomplished in those days by what we would now call *main force* and *stupidity*. Changes from what existed a century ago are necessary, in view of the increased knowledge in our day.

Modern education teaches us to do our own thinking. It stimulates us to constantly seek a better way regardless of where it may lead. The progressive individual is no longer bound hand and foot to one idea. The world has need of men and women who keep their eyes and ears open, their minds furnished with the truths and principles revealed ttrough science, careful study and broad observation. Then let us dilligently plod onward doing all in our power and might to further agricultural education and the social and financial condition of the farmer. We should look upon it as a duty as well as a pleasure to belong to such a society. I think that one deserves credit of being a philanthropist indeed, who first conceived the idea of a Women's Institute. We do not claim perfection for our Institute or expect that it will work wonders. It is doubtful if that organization has yet been thought of that none can find fault with.

We hope soon to be able to report just as many Women's Institutes, and in just as popular and as flourishing a condition as the Farmers' Institutes are in this prosperous proviuce of ours. I would like to urge all the ladies to work with us unitedly. We are none of us too old to learn to discard wrong methods for right ones, and to undo mistakes resulting from ignorance in the past. We have all the time there is still left in which to overcome old errors, so let us begin at once to take pleasure in simple and honest living, knowing that it is the only hand of the dilligent that maketh permanently rich, and to learn to love excellence for its own sake.

WOMEN'S INSTITUTES.

By Mrs. A. Kinney, Grandview.

As the nineteenth century inherited the goose quill pen but bequeathed to its successor the type-writer, so also the dim light of the tallow taper has been altogether quenched by the brilliancy of the electric lamp. We are not to-day walking foot-sore and weary, following the woollen thread from the old-time spinning wheel, though idle to-day is a treasured keepsake. One person to-day with the aid of machinery is doing the work of one hundred persons as compared with the beginning of the nineteenth century, leaving the ninety and nine to study out and develop more and more of the resources of mother earth still unknown. Many of us may remember watching with unabated interest our mothers, grandmothers, aunts and older cousins using the old spinning wheel. How daintily they handled those fleecy rolls, and when one had been spun, leaving only a short, woolly end, they carefully picked up another and deftly fastened it. Then gracefully stepping backward holding the roll carefully in the left hand, the right hand was extended upward, touching the great big wheel, which soon went buzzing around, giving that business-like hum which meant a finish to the fleeciness of that little roll. With a few more graceful steps, clasps and turns it was wound on the spindle to afterwards be doubled and twisted for yarn or woven into good warm homespun. This is of the past, though still treasured as a memory of the good old times of yore, and days of simple, honest living.

We should have to-day more time for mind improvement and scientific research, and thus be able to converse on useful subjects rather than, shall I say, gossiping. Women are accused of having a weakness in that way. Is the cause a desire to haul some poor, undeserving victim over the coals, or is it because we lack something better to talk about? We will leave all such subjects in the back ages, and as we have stepped into the new century, aim in leaving worthy imprints that others following our example may not err therein. Do we, in our homes, make many crooked, erring steps by being quick-tempered and irritable, and oft times do not have the sunshine in the home that is smiling outside? And have we

> "A careful word for the stranger
> And smile for the transient guest,
> But oft times bitter tone
> To those whom we love the best."

Oft times these harsh words are spoken when we are overtaxed, having more on our hands than we are able to accomplish. Cannot we cut out some of the unnecessary work, and as our English lady expresses it, "give over trying to do two days' work in one." Our cook stove will do just as good work by being clean, but it does not need to shine so particularly bright, and our kitchen floor is not any warmer nor more healthful after having wasted much valuable strength to have it so extremely white. It is not necessary to have it in that particularly chaste way. We do not as a rule stay too closely at home? Some years ago the mother in a rural home was being removed to an insane asylum, when her husband remarked that he wondered how she had caught that disease, as she had scarcely been away from her own kitchen for over thirty years!

The Women's Institute will help:—1. To break the natural isolation and monotony of farm life by bringing us in closer communion with each other. 2. Will also help to break down selfishness. Many who may think their way of doing things absolutely perfect may be convinced that there is an easier and better way, and, seeing their error, will throw their minds open to the reception of knowledge on all subjects, it may be to their own advantage, as we are helped by comparing experiences one with

the other. 3. The discussions and debates bring out latent talent, developing in us the power of expressing ourselves in public.

The discussions as well as the writing up of different branches of the work tend to clothe our occupation with its real importance and dignity, as life on the farm is second to none in nobility and independence.

Occasionally we meet with women who have spare time on their hands. How is it employed? By stitching, stitching, stitching at fancy work! Yes, and many who have not spare time are pulling out threads of linen or embroidering fine, fine stitches, putting their strength and energy at a very low value, when they should be resting both mind and body. Let us aim at higher value and not be slaves to fancy-work and living for show.

Will not those who have spare time on their hands look around? There may be an opportunity to lend a helping hand to some friend, on whom life's burdens seem to weigh heavily, and by so doing cheering an otherwise sad life. It may also be the means of securing another helpful member in your institute. A little mission work occasionally in connection with the institute work should not be out of place.

The pioneer Women's Institute has for its motto "The uplifting of womanhood and the broadening of her sphere of usefulness."

Are we improving our methods, and are we ever ready to grasp new ideas which are being brought forward daily? Do we want to know more of our profession? They who know the most are usually the most anxious to know more. We are losing interest in fancy cooking recipes, but what we want is a better understanding of food merits and values. Yes, "balanced rations" for our growing children, not allowing them to carry out the giddy lassie's idea to "drather eat what they drather."

As we note with pleasure the indications that our educational system is undergoing a transformation; as domestic science schools are being opened all over our Dominion, and as we realize the broadening influence of the Women's Institutes, we look forward to the time when we shall see a band of old ladies in every community, not stooped by premature infirmity, but bright, cheerful and healthy. Let us sound the trumpet loud and long that from the woman's standpoint, HOME, we are ever ready to help along the reforms of the day, as well as prove ourselves willing, cheerful co-workers in anything and everything which tends to brighten home life.

Woman's work, woman's influence, mother's work and mother's influence! Where does it begin? Where does it end? Can we solve the problem? Our housewife, instead of being a person of a single occupation, is rather a worker in various arts. We hear man's work spoken of thus—

The farmer behind the plough.
The blacksmith behind the anvil,
The merchant behind the counter,
The machinist behind the lathe,
The engineer at his engine,
The clerk behind the desk.

and so on to the end of the chapter. Where do we find our housewife?

As cook—behind the ranges, kettles (heavy and light), pots, basins, frying-pans, etc.

As baker—behind the oven, flour, dough, etc.

As laundress—behind the wash tub and washing machine, mangle, wringer, ironing board, etc.

As housemaid—brooms, carpet sweeper, dusting cloths, scrub brushes, etc.

As seamstress—tape measure, designer, pattern, cutting, fitting, sewing, making, etc.

As hostess—receiving, entertaining, tea table, dishes, decorations, etc.

As wife—love, confidence, purity, happiness, success.

As mother—cradle, patience, kindness, education, character, heaven.

Where shall we place our housewife? Behind the home; the foundation of the universe. Daughters, sisters, wives, mothers, we have grave responsibilities. We must look well to our laurels. Yes, there are Martha Washingtons to-day. There are

Susannah Wesleys to-day. There are Harriet Beecher Stowes to-day. We will be strong. There is no time to play or drift. Shun not the struggle; it is our work; it is God's plan!

We cannot fail in seeing the great benefit that the Farmers' Institutes are and have been to the farmers in educating them in more improved methods of farming, also in more economical ways of feeding their stock, which knowledge could only otherwise have been gained by attending the O. A. C., or some other similar institution. What the Farmers' Institutes have been to the farmers, the Women's Institutes purpose to be to their wives and daughters.

Reports tell us that the O. A. C. is filled to overflowing year after year with farmers' sons, being educated along more scientific lines of farming, and as these young men go out to all parts of the country, is not this science going to spread rapidly? As the leaven leavens the whole mass, so will these improved methods be widespread. Our sons may now be well equipped not only in practical knowledge, but also as scientists. But what about our daughters? A year ago the question was raised regarding a school of Domestic Science in connection with the O.A.C. Now all are rejoicing in the fact that through the generous gift of Sir William McDonald there will be such a school in the near future.

One grand feature in connection with the Women's Institutes will be the possibility of securing the services of these Domestic Science teachers to give practical demonstrations in cooking some of our daily foods at Institute meetings.

HOUSEHOLD SCIENCE.

THE FARM HOME.

By Miss Fanny Knight, Sault Ste. Marie.

Each and every person listening to me to-day has a home, and with what pleasure we turn our steps homeward, after an absence from it. There we see the familiar faces of father, mother, brothers and sisters, and every object seems like an old friend to greet us on our return.

Why is home so dear? Is it because of beautiful houses, fine lawns and shade trees, modern conveniences and everything up to date? By no means. It is because those that love us are there, whether it be mansion of wealth or cabin of poverty.

I believe the most important factor in farm life is the farm home. Who can appreciate the comforts of an evening spent in the society of his wife and family more than the busy farmer, who has toiled from early morn till the setting of the sun in the open air cultivating the soil and doing the numberless tasks which fall to his lot? The merchant, banker and the majority of men working at a trade, are confined to closed rooms during the day thus making it necessary for them to spend a part of the time in the evenings out of doors in consideration of their health, but not so with those whose work makes it necessary for them to spend a large portion of their working hours outside.

How can we make home attractive? The wife, the mother and the sister are the home-makers, and there is one place where woman has her rights, and where, alas, many fail to live up to their privileges. Hers is the right to cheer the tired husband, father or brother with a bright smile, a good dinner and a neat room; hers the right to sympathize in sorrow or joy, and interest herself in the evening pursuits and pleasures of the boys. She it is who holds the sacred right of influencing and thus having a share in the moulding of the characters of those around her. If every woman used her influence as the precious gift which God intends it to be, the result would

be such a change in the lives and actions of men that we would scarcely recognize this as the same world, in which we are now living.

I fancy I heard some woman say: "Oh, yes, that is all very well in theory, what about practice? It is not always easy to have bright smiles and a good dinner when you have to spend half the morning acting as chore-boy around the farm, or waiting on the men, who seldom can find anything they want without calling to their wives for assistance. Then when the missing article is found and peace once more prevails out-of-doors, to hurry into the house to find the fire out, the house in a state of dire confusion, and dinner time coming as fast as the clock can tick the minutes off." Here is where the man's part comes in. Do your own work and don't expect your wife to do two people's work. You have labor-saving machinery to do your work—get her the modern conveniences to do hers, and don't be afraid to spend a little time and money on beautifying the home. Plant shade trees, make walks, dig up earth for flower beds—ever so many—and if the women in your house fail to plant the seeds, or to be ready helpers in all your plans for the improvement of the yards and gardens, there must be something wrong somewhere. Make home just as beautiful as your means and abilities will allow.

Don't be afraid to give a half holiday to the boys, and to take one yourself, when a picnic or other pleasures present the opportunity You will work better yourself and get better work from all in your employ for the change; and life will not be a steady grind of work, work, day after day, making the boys wish for a chance to see more of the world, and thus driving them away from the farm as soon as they can manage to go. Let everyone, especially the wives and sisters, endeavor to make home pleasant in its outward appearance, its social life and its surroundings; and one of the farm problems, "How to keep the boys on the farm," will be solved. This will be a great point gained, for the free, unrestrained life of a country boy gives him the best foundation for future greatness, viz., a strong body and a pure mind, ready to grasp and retain that which will make him a great and good man.

HOW TO MAKE HOME ATTRACTIVE.

By Mrs. James Armstrong, Gorrie.

Home! What tender associations are linked with home! It is one of the sweetest words in the English language. Nothing but death can break its spell. Home is not the mere dwelling-place of our parents, and the stage upon which we played the part of merry childhood. It should not be a simple habitation, but a divine institution. The first home was in Eden; the last home will be in Heaven. The highest aim and duty of our lives should be to make our homes comfortable and attractive to all its members. Comfort is very important, and every ambitious and good woman will make home as comfortable as her means will allow. She will also try and make home pleasant and attractive. To make home attractive, we must practice a good deal of patience and forbearance.

It is woman's mission to make sunlight in the home, and perhaps there are some of us who find our lives, as it were, set in a sunless, northern atmosphere, that requires all our tact to tint with sunny hues. To make home life sincere, attractive, refined and uplifting is a task well worthy of the energies of all the members of the household. I think it largely depends on the women of our homes, whether these homes are attractive or not. It is the mother which gives it life. The principal part depends upon her. She should see to it that the home is ever bright and cheerful; herself and the children always neat and tidy. Sometimes we may think it does not make any difference how we look in the mornings, while we are at our work. You will very often see women very untidy, who have plenty of nice clothes. A lazy woman in a wrapper, yawning half a day over a novel, is a disgrace and should not

be found outside a story book. Rather should the reality be a trimly-dressed, quick-stepping woman, encouraging by her example her children and her servants (if she has any) to be neat and skillful. It is not so much wealth or learning, or town or country, or station as it is tone and temper that render home attractive.

Sometimes we fix up our homes altogether too much with the idea of what the outside world will say about them, or to out-do our neighbors. If we would dismiss a little of the show that is now so prevalent in many of our homes, we would not only reach a happier state for ourselves and make our homes more attractive for its inmates, but would remove one-half of the nervous ailments from which our women are now suffering. It is all right to have a pretty home, in fact, it is our duty to have it so, but do not let our parlors and other rooms resemble museums, for if you do the men and children will be more comfortable when they are out of them. Furnish your homes with pretty, sensible colors, which will stand the light and sun without fading, so that you can have the blinds up and can let in the sunlight and air. Men and children especially love sunlight and air. Sunshine is one of our best friends in many ways, and no home can be attractive which is darkened up for fear of fading the furnishings or of letting a fly in.

Flowers help to make a home attractive. They are cheap and within the reach of all. How much more attractive our homes are with bright blossoms and green foliage, instead of dark, cheerless windows, no matter how elegant the curtains and fixings may be. Almost every one loves flowers. As each small bud appears and unfolds tiny hands will be clapped for joy, while to the father and mother they bring fond recollections of happy hours and pleasant faces almost forgotten.

So many mothers ask themselves, "How can I best keep my children at home and off the streets, where they learn so many questionable things?" The question might be answered, "Make their home cheerful and attractive for them; try and fill their hearts with the love of the beautiful, so that much of the bad will be crowded out." Let them find so much pleasure at home with flowers and books and other useful and helpful things that the desire to roam the streets and associate with the class of companions they find there will be gone. Make your home so pleasant, bright and attractive that they will not wish to go any place else for pleasure. Make your children your friends; confide in them; let them share with your husband all your plans, hopes and desires. Do not use harsh language. Let the children remember you as models of patience, purity and strength. Let us make home the swestest, most attractive place on earth to its inmates. Good literature is a pleasant feature in our homes. Teach the children to read and discuss the various topics of the day, also if possible have music in the home, as it is one of the greatest attractions. Those who have it in the home, know what a source of attraction and pleasure it is. Always have everything about the meals bright and cheerful. It is the place where the family gathers three times each day, and very often our best opportunities to display home talent are found there. Have the dishes and table linen clean and bright. Have a vase of flowers, if possible, to adorn the table. Encourage the children to join in the conversation. I do not mean to let them chatter and monopolize the talk, but teach them to cultivate conversation. Always meet each other in the morning with a pleasant word. Let us not forget that everything good in our earthly home has its echo in heaven.

WOMAN AND THE HOME.

By Mrs. E. C. Monkman, Castlederg.

In presenting this paper to the Institute, I wish to state at the outset that the ideas in it will in no wise correspond with many of the so-called reforms that are being demanded in the name of "Woman's Rights" and by societies of what we call the "New Woman." In fact, I fear that I may have fallen into the opposite extreme and may be in danger of being called old-fashioned.

In the evolution that society is passing through at the present time, the most notable feature is that of the change of position of women. Formerly it was thought that woman had no right to education beyond the mere rudiments, and that she had no business with these higher things, even if she had the ability, which was then considered doubtful. All this has now changed. Woman has entered all our universities (with the exception of Oxford and Cambridge, which still refuse to admit them) and has taken her place with man, side by side in all the courses, and in some of the courses has even surpassed her brother students.

The learned professions are now all open to women. Teaching, medicine, dentistry, even law, the most conservative of all the professions, has at last opened its doors and women may now plead cases at the bar. Such being the case, it behooves us to ascertain how far and how much we can rightly enter upon these professions without losing that indescribable something known as the "feminine charm."

It is now admitted by all that women have the right to this higher education, but I do not think it is at all desirable that we should have along with it that masculine air and manner so easily discernable in our "new woman" or even in our "business woman" of to-day.

Having admitted the right of women to avail themselves of this higher education let us see what the use or aim of education should be. The use or aim of education should be to fit one for the better, more careful and more intelligent performance of present duties, whatever they may be. It should also bring us into contact with what the best and greatest minds have left us on every possible line of human thought. This being the case, let us review shortly how the great minds have regarded women, also what they regard as her sphere.

Let us first consider Shakespeare. It has been said by Ruskin that Shakespeare has no heroes, he has only heroines. Of all the men he describes, the only one who approaches the heroic is his description of Henry V., and it is exaggerated for the purposes of the stage. The catastrophe in each play has been caused by a man. The salvation, if any is possible, is wrought out by a woman. In all the principal features of Shakespeare's plays there is only one weak woman, "Ophelia," and it is because she is so and cannot be a guide to him that Hamlet fails.

Next, let us regard the writings of Sir Walter Scott. In his works only three men reach the heroic type. The others are the mere playthings of fantastic fortune and win or fail as the combination of circumstances in which they are placed point to failure or success. None of them have the intellectual power and the infallible and inevitable sense of justice present in Rose Bradwardine, in Ellen Douglas or in Flora McIver. Much more do the men lack a fearless, instant and untiring self-sacrifice to real duty that not only forces them to act, but forces their friends to correct actions also. So that in all cases in Scott's works, as with Shakespeare's characters, it is the woman who watches, teaches and guides the youth. It is never by any chance the youth who watches over or guides his mistress.

We might summon other authors to our aid on this question, but we find the rule to be invariable. The woman is the one who inspires guides, and directs man to higher actions. The man is the doer. Not that the woman is as the general of any army, to give commands, but by her sweet and silent influence she incites and inspires men to act in the right way, with the feeling that they are acting of their own free will. Formerly man thought that woman should never guide nor even think for herself. The man was always to be the wiser. He was to be the thinker, the ruler, the superior in knowledge and discretion as in power. The present "new woman" considers "woman's rights" and the "mission of women" as if we can ever separate them from the mission and rights of man; as if she and her lord were creatures of independent kind and irreconcilable nature. Are not both of these views wrong, and should we not rather accept the dictum given us by the great minds of all past ages, viz., that woman's particular province is to guide?

The characters of men and women are essentially different. Man's power is

active, progressive and defensive. He is eminently the doer, the creator, the discoverer, the def nder. Woman's power is for rule, not for battle. Her intellect is for sweet ordering, arrangement and decision. She sees the qualities of things, their claims and their places. Her function is to praise, to encourage, and to comfort. She is by right, as Ruskin puts it, the arbiter of praise and of blame. She sets the standard of her men folk high or low as she chooses. What she shows a hearty contempt for is sure to lose ground as a social custom or opinion. Whatever laxity of manners or morals she tolerates is equally sure to gain ground. If she bends her countenance to the lascivious theatre, a low-pitched literature, a paganized art, men will never reform these evils. If she sanctions the living of an empty, idle and frivolous life, then that will be the life of her male friends. But if she sets herself against these things they will be disused and despised. Not childhood only, but the world at large is plastic under her hands.

Where is the place where women may exercise this queenly power of ruling and ordering affairs? There can be only one answer to this. In the home. It is the place of peace; the shelter not only from all injury, but from all terror, doubt and diversion. In so far as it is not this, it is not a home, but only a part of the outer world that you have roofed over and lighted a fire in. Wherever the true woman lives, that home is always about her. The stars only may be over her head, the glow worm in the grass may be the only fire, but home is yet wherever she is and sheds a quiet influence around about to those who have no home.

Such being the sphere of woman, let us next consider the best education that will fit her for that sphere. The first requisite I consider necessary is good physical exercise and culture of character that will develop her strength and perfect her beauty of body and of soul. The second requisite is a good moral training, so that she will do what is right and think kindly of those with whom she may come in contact. And as our characters are written in our faces, we say of such a true woman,

"A countenance in which did meet
Sweet records, promises as sweet."

Such a countenance she will have if she has been trained to kind thoughts and kind actions. Then, as to her mental training, I believe it should be as broad and liberal as it is possible for her to get, so that she will be the better fitted to fill any position in which she may be placed in life, and leave her mark in the world.

"The lives of great ones all remind us,
We can make our lives sublime
And departing leave behind us
Footprints on the sands of time."

HEALTHFUL HOMES.

By Miss Alice Hollingworth, Beatrice.

It is satisfactory to note that with the opening of the twentieth century we are at last beginning to realize that all the bodily diseases and discomforts from which we suffer are not a "divine visitation," but the result of our own ignorance and neglect, or that of our neighbors or ancestors. When diphtheria and fevers break out in our midst, instead of folding our hands and saying, "It is the Lord's will," we have learned that it is a better religion to clean up our dooryards, cellars and sinks and keep our windows open. Dr. Henry MacCormac says: "We live or we die, live well or miserably, live our full term or perish prematurely, according as we shall wisely or otherwise determine." Unfortunately, we do not realize as keenly as we should that it is not only our own term of life, but the lives of those around us which we help to determine.

Stagnant water near buildings, foul odors from neglected pig-pens or dead animals left unburied on our premises, may cost our neighbor his life; or the unsanitary conditions within the house may, and often do, give rise to infectious diseases, which spread far and wide, and, like the sunshine, fall upon the just and the unjust, the clean and the unclean.

The fundamental principles of good health are pure air, pure water and pure soil. These three things, nature gives us free; when they cease to be pure the fault is ours. To keep them pure we must first of all have the land around our homes carefully drained. Stagnant water on the land contaminates the wells, prevents the soil from acting as an absorbent and disinfectant, which are its natural properties, and the foul odors which a dry soil would absorb are spread more effectively by moisture. It is a true saying that where woods rot, men decay. Keeping the soil pure around the house is a thing that meets with scant consideration. In the great majority of farm houses, the kitchen slops are thrown an arm's-length from the doorstep. When it has been thrown in one place for any length of time the soil becomes over-saturated and clogged with impurities, so that it can no longer absorb the decaying matter, and as the foul odors arise it becomes a fertile breeding-ground for the germs of disease. A sink and drain is such a cheap and simple contrivance that it is a shame for any kitchen to be without one. Of course the sink requires some care, but hot water and soda are cheap and effective.

For drains I have always found copperas, dissolved in water, a sure cure for bad odors. Even worse than the slop-water nuisance is the carelessness shown in the location of wells where they will get the drainage from house or barnyard, quite often from both.

Dr. Stephen Smith describes a visit to a country clergyman, a former schoolmate, who told him of a family, five of the members of which had died and another was then fatally ill with typhoid fever, and he had not thought of attributing it to anything else but a "visitation of Providence." An investigation showed that during a busy harvest the valve of the pump had got out of order, and there being no time to replace it, water had been taken from a brook which received, higher up, surface water and drainage from several barnyards. Of the entire family but two escaped attack, and they had not used the water.

I have known of several deaths from diphtheria where water was used from a well that received the drainage from either house or barnyard. The purity of the water in any well depends almost entirely on the ability of the earth, through which it descends, to deprive it, by filtration, of its organic impurities. It is always a question between the amount and character of the filtering material and the amount and character of the impurity. In a deep, porous soil where the water table lies at a great depth, there is little danger, unless the grossest filth on the surface near by is constant and long-continued. But where the water level is near the surface of the ground, or where the well is supplied through rock fissures or gravel seams, which open near the surface of the earth, the most scrupulous cleanliness is needed to prevent contamination. A well may be good for a long time and subsequently become poisoned, because the soil lying between the source of the impurity and the well itself has a certain amount of cleansing power. While this is effective every impurity is withheld, but by degrees the soil becomes foul farther and farther on, until at last there is no grain of uncorrupted earth to purify the water.

Unsanitary conditions are inexcusable on the farm. People in cities are compelled to suffer from conditions which they cannot control, but it is not so on the farm, and it is not a question of money either. No man is so poor that he need have his pig trough at the front door or throw slops under his dining-room window, and every farm will furnish earth enough to bank up the house in autumn, without having recourse to the stinking manure heaps. Yet these are conditions which meet our view as we drive through the country.

The subject of drainage is very important. In selecting a site for a house a

slight elevation should be chosen, so that there will be natural drainage to aid the artificial drains. The cellar, which is sometimes the last thing considered, should be the first, for to a great extent its condition decides whether the occupants of the house are going to be healthy or unhealthy. Above all things, avoid a damp, dark unventilated cellar; have a free circulation of air at all times, sweep out frequently, and whitewash once a year.

It gives me pleasure to see in many of the new farm houses the well-laid hardwood floors, which are oiled, so that they can be kept clean and free from dust with the least labor possible. This is a long step in the right direction. Carpets are an unwholesome luxury, which we all enjoy and cling to, but the quicker we give them up the better. There is a freshness and sweetness about a room with a washable floor that you never get with carpets. I have great faith in soap and water. They go farther in preventing disease than the contents of a dozen drug stores. For this reason I like to have just as little as possible that is unwashable about the house, especially in bedrooms.

Lack of ventilation in the bedroom is a frequent cause of headache and listlessness, which is the inevitable result when we breathe in again the carbonic acid gas which we have exhaled. It is also a mistake to keep soiled clothing in the sleeping room, especially in hot weather. Even with the windows open one can often smell the perspiration on the clothes that hang behind the door.

The sanitary condition of any home is incomplete without a bath tub. When a good zinc one can be bought for les than $6.00 the cost sinks into insignificance when compared with the comfort and healthfulness which it gives. It is both a necessity and luxury. If the tired woman, who has been working for hours in the hot kitchen until her limbs are aching, can slip away from her work to lie for a few minutes full length in tepid water, then put on fresh clothes, she will feel that half her burden of cares has vanished. Nobody knows better than the boys how to appreciate a bath, and when they come in from their day's work in the field, hot, dusty and wet with perspiration, it is with the keenest pleasure that they hasten to the bathroom for a refreshing dip and dry clothes. Yet there are hundreds of tired women, hundreds of hot and dusty boys, who with all their hard labor are deprived of this simple comfort. Discretion should be used in the temperature of the water for bathing. A cold bath is bracing for those who can stand it, but serious results follow the use of cold water when the body is over heated. Tepid water is the safest at all times.

I cannot close without saying a few words about the glorious sunshine, for it does not get half of the appreciation that it merits. So many women pull down the blinds and shut it out as if it were an enemy instead of the life-giving friend that it is. All life, both animal and vegetable, requires sunlight and cannot thrive without it. It is a foe to disease, and should be admitted freely into every room in the house.

KINDNESS AND ECONOMY IN THE HOME.

By Mrs. D. McTavish, North Bruce.

When we consider what an important place small things occupy ,and what an influence they have on our lives, we might do well to consider a few of them.

Our lives, be they long or short, are lived but a day at a time, and each day is made up of what we might consider small events, but when we come to think over them we find that it is these same small events, which we are apt to consider trivial in themselves, which have gone to make up our joys or our sorrows. It is not coming into possession of a great sum of money, or inheriting broad acres, left to us perhaps by some relative who has departed this life, which gives us the greatest pleasure, but we find that it is the thousand and one trifles, we might call them, which have quickened our step and brightened our eye, the love and trust of our children and the

small courtesies of life, experienced day by day. In the same way we find that it is not what we might consider the great griefs and sorrows of our lives which have had the most effect upon us, but it is the small harassing cares, which, like "the little foxes, spoil the vines." Just as it is not the wild beasts of the forest which ruin our crops, but the small insects, which can scarcely be seen by the naked eye, so it is the little carking cares which silver our hairs, and rob our steps of their elasticity. See to it then that we do not be sparing of small courtesies. Let us try to lighten the cares of those around us. A pleasant word costs us nothing and it may send some one on their way rejoicing.

"Slightest actions often meet the sorest needs,
For the world wants daily little kindly deeds."

And to the members of Farmers' Institutes and others, I would say, lighten the burdens of your helpmeets as far as you can be kindness, and do not be afraid to let them know that your appreciate their untiring (but often tiresome) efforts on behalf of yourselves and your families. A kind word now, or even a smile, will be far better than long obituary notices and columns of poetry setting forth their good qualities. Speak approving, cheering words while their ears can hear them, and while their hearts can be thrilled and made happier by them. The kind things you mean to say when they are gone, say before they go. Post-mortem kindness does not cheer the burdened spirit.

Do not be ashamed to practise small economies. By that I do not mean that you should be niggardly or penurious, but we all know the old adage "A penny saved is a penny earned," and we must also remember that the one that is saved has just the same purchasing power as the one that is earned. It is only by economy that we get the most good of everything, as what is wasted does no good either to ourselves or others. There is no gainsaying the fact that we live in an age of detail, and that money is not made as in former years, but rather saved by economizing in every possible way. That is what our most progressive farmers are doing, endeavoring to find out where they can cut down expenses, and at the same time increase their returns. We should also try to economize our strength and energy, a great deal of which is wasted in needless work which we do. Let us aim more at health and comfort, and less at ostentation and display, and we cannot fail to be happier.

CONVERSATION AT THE TABLE.

By Mrs. Sanderson, Gorrie.

It is not what is eaten, but what is digested that makes one grow, and, as we all know, a little laughter and conversation aid digestion. Dr. Johnston has said it is worth one thousand pounds a year to have the habit of looking on the bright side of things.

As a bright fire on a sharp, frosty day gives warmth and comfort to a cold person, so does a bright countenance and cheerful talk impart a certain degree of happiness to others and help them to look on the bright side of life. Hence we should cultivate conversation that is warm and genial, not cold and repulsive, dark and morose. Personal and sarcastic remarks show not only a bad heart but bad taste also.

Conversation in many cases is just what prevents many people from relapsing into utter selfishness, thus conversation should not simply occupy husband and wife and older members of the family, but extend itself to the children. Parents should be careful to talk with them, to share their trifles and to meet them in the thoughts and feelings of their childhood.

The tastes of your children are being framed now by the things they see and hear, and as that taste is lifted towards the lovely and inspiring, or is allowed to sink

to the merely useful and sordid, so will their lives be full or empty of the things which make life a delight.

An old lady who looked as though she might have belonged to the Sunshine Society all her life, was asked by a friend for the secret of her never-failing cheerfulness. "I think," said the old lady, "it is because we were taught in our family to be cheerful at the table. My father was a lawyer with a great criminal practice. His mind was harassed with difficult problems, yet he always came to the table with a smile and pleasant greeting for everyone, and exerted himself to make the table hour delightful, and the effect was marvellous. We were taught that all petty grievances and jealousies must be forgotten when meal time came, and the habit of being cheerful three times a day under all circumstances had its effect on even the most sullen temper."

"A pocket full of sunshine
Is better far than gold,
It drowns the daily sorrows
Of the young and of the old.
It fills the world with pleasure
In field and lane and street,
And brightens every prospect
Of the mortals that we meet."

GOOD MANNERS.

By Miss G. Taylor.

Good manners are the expression of good breeding, and socially wise, in his generation, was the man who defined good breeding to be "the result of much good sense, some good nature, and a little self-denial for the sake of others, with a view to obtain the same indulgence from them." The essence of good manners lies in a desire to do and to be the best that circumstances permit, and circumstances, under any name are partly of our own making, and more or less directly under our individual control.

An adult, whose immature habits of mind and thought have been formed from contact with, or been guided by, those whose ideals are in contradiction to the best usages, may by study and care correct deficiences and perhaps entirely overcome them. But the transformation must be wrought through anxiety and doubt which are not conducive to social enjoyment. Such people are apt to look upon the varying forms of social courtesy as shallow pretenses, as indeed they are, to his well-meaning, but untutored mind.

On the other hand the man, whose childhood or youth was blessed by the companionship of cultivated, thoughtful people, whose principles bore fruit in every-day actions of courtesy and kindness, is certain to retain some appreciation of their value; and though circumstances may cast his lot among those whose uncouth ways are excused by the limitation of their surroundings he will ever cherish a regard for the finer modes of daily living, in learning which he also received his earliest lessons in perfect self-control, which underlies the qualities which have made him a leader. Such a man is always ready when circumstances favor, or command, to assume and discharge his social obligations in keeping with the highest standards of taste; and whatever changes of formula may be made to keep pace with the changing conditions of this progressive age, are as readily accepted by him as are the changes of the seasons.

The carriage of the body, the tone of the voice, the place and the time for speech as well as for silence, the self-denial with which good taste checks any act that might from one point of view seem justified, but which, from the high, clear outlook of a well-poised mind would be entirely inexcusable, all these and many other things must be studied by the person who aspires to receive what the world accords to its best men and women.

Good manners are not made up of formulated ceremonies nor unalterable habits, nor should they serve the purpose of a screen behind which to hide our real characters. A civil act is not necessarily a kind act, but it is rarely an unkind act, and the essence of good manners is expressed in the injunction to think and act kindly. Forms may vary, but all is based on civility. The key to the highest, most exacting, and most acceptable social etiquette is a perfect regard for the rights of others.

The mother, who has the highest appreciation of the value of good manners, is the most zealous and efficient educator of her children in such matters. She knows the advantage of early beginnings, but she is apt to forget that the impressionable little creatures hear a great deal which they are not, perhaps, able to repeat, but which leave a strong impression that voices itself in a most unlooked-for and sometimes a very disagreeable manner. Very often these startling expressions of the little growing mind are only laughable, but they teach a lesson, and emphasize the value of household civilities, even where courteous conduct is the rule of life.

A command prefaced by "if you please" loses none of its force, if the speaker be dignified in manner and tone, and its utterance in this form will be more readily repeated by children who have always thus heard it. "Thank you" is quickly said, yet it is not always heard between members of families, who would be shocked if told that they were negligent of the details of good-breeding.

A wholesome respect for those who serve us faithfully cannot be too early instilled into the minds of children, but in fairness it must be said that the absence of any such feeling is very noticeable in the conduct of children in many families. Indeed, the rude and often boisterous authority which juveniles are allowed to assume when deputed to convey a message to servants, is justly instanced by critical observers of family life in America.

The instinct of dominion is strong in the young, and tends toward the subjugation of those above as well as those below them, but while the evil is as great in one direction as in the other, it operates more disastrously when children are allowed to assume authority which they do not know how to use. One of the most glaring sins against good breeding in the household is thus countenanced, and a child to whom such latitude is given will never (save by the miraculous workings of good sense) become that paragon of society, "an easy" host or hostess.

"Mamma" and "papa" sound stiff and ceremonial to those whose ears have become used to the numerous curt and disrespectful titles which are often vouchsafed to parents. Against such appellations all the gentle graces of good breeding and refinement protest. If "papa" and "mamma" are not easily learned, then begin in the nursery to teach the strong, respectful yet endearing "father" and "mother" of earlier times.

An essential element of good manners is self-control. Not to say the thing that leaps to the lips first, to choke down a bright speech that is at the expense of a companion, to stifle the first desire to say "no" when a plan is eagerly proposed, to put aside a book when one's company is needed, to enter pleasantly a game that does not particularly attract, to suppress an inclination to criticize, these are only suggestions of the numerous ways in which the control of self increases one's ability to please. If we would not violate the laws of good breeding our surest course would be to have every act, however small, conform to the one simple command: "Thou shalt love thy brother."

SMALL COURTESIES IN HOME LIFE.

By Mrs. James Gardner, Kemble.

"A man or woman's own good breeding is the best surety against another's bad manners."—Lord Chesterfield.

Temperance in speech is no less a virtue than self restraint in any other di-

rection. Our conversation bears so important a part in social intercourse that we make some attempt at it whenever we meet our friends. It is strange, therefore, that we are not more proficient. In the home circle, however, too much is often taken for granted and the graces of true politeness are sometimes entirely dispeused with. The charm of an agreeable conversation is appreciated by all and its cultivation is within the reach of each. Nothing so quickly opens hospitable doors or shows a warm welcome.

Entertaining conversation does not all depend upon a well-stored mind, a ready wit, or a broad culture, but shows qualities of heart as well as head and should reveal sympathy, sincerity and simplicity. Sympathy and adaptability are in a measure created by a desire to please, but it is not merely from a desire to please in society that manners should be studied, but from the wish to consider the feelings of other people. Manners are much more than the word implies. They include courtesy to all, patience under severe strain, and a calm and modest personality.

We should be sensitive to the mood of our listeners and quick to perceive when some one else wishes to speak. There are talkers who seem to take the bit between their teeth and run away with it, and when they do cease no one has anything to say. The common defect of the talkative woman, is the habit of repeating the same statement several times during a single conversation. Whether she suspects you of deafness, stupidity or inattention it is hard to say, but she will inform you five, ten or twenty times in an hour that her children were all born very clever or that she is very nervous, or that she never eats porridge, or that she always reads in bed, or something else of equally profound interest!

Without sympathy no conversation has any charm. The moment that we perceive that the speaker is trying to produce an effect by unnecessary mention of desirable acquaintances or boasting of advantages, or display of attainments, that moment do we only feel contempt for the affectation and pretence. Truth has a marvellous power of making itself felt, no matter what may be said or done. Frankness is admired by every honest man or woman.

The qualities which put us in wrong positions towards life and cause much unhappiness are selfishness, vanity and a desire for sympathy, popularity or public favor. There are always people whom we cannot come near without the feeling that to interest them we must pay tribute to their vanity or limit our conversation just so it may please them. Another class equally disagreeable are those who have so small a soul that they speak in censure of everything and attempt to belittle the efforts or remarks of everyone else, so that their own virtues may shine in comparison. This class mosly have the fault of expressing themselves in the most extravagant manner, so that one cannot rely upon all that they say.

Vanity makes us unhappy because it causes a useless waste of time, ever striving for popular approval. It keeps us wronging others that our own virtues may shine in contrast. Selfishness makes us hard, narrow and vulgar and vastly lesseus our sources of pleasure. Happiness lies in self-forgetfulness, and to secure it we must cheerfully accept the conditions of our lot, hope for the best and have faith in the future, and try to do all we can for ourselves and those about us without worrying about consequences. Self-consciousness is but vanity under a less severe name, and self must be forgotten before we can add to our speech the grace and dignity of simplicity. Dignity is the chief charm of woman, just as conversational brightness is her chief accomplishment. We all want to have that charm, and we feel that it is all-important, but it is so subtle, so hard to understand!

What is dignity and how are we to get it? Of one thing I am sure, that dignity is not conceit. It is not "I-am-better-than-you-in-the-social-scale," it is not the stiffness of sticking to certain rules. Dignity that has to make a sensation is not dignity at all. If it were any of these things I would say throw dignity to the winds. But dignity demands that certain conditions be reverenced. You must have reverence if you would have dignity. Laugh at shams if you will or the humor of real

life, cultivate the witty reply that hurts no one, but never make a butt of old people, of religion or of love. All three are sacred. There is no old woman who was not once as young as we, with an eye as bright and a soul just as open to the beautiful in life, and perhaps an ambition just as high. We are to her a picture of what she once was, she is to us what we sometime may be, and that is often no laughing matter. Reverence for religion includes other people's religion as well as our own. The singing of the Salvation Army, the feet-washing of the Mennonites and the silent gathering of the Friends should make us feel nearer to God and nearer to heaven.

Gossip has gone out of fashion. It is no longer considered nice to say a word against anyone. An ill-natured remark is a social blunder as well as a moral one in good society. We should not allow lapses of manners or levity, and above all the careless expression of a low-grade of thought. This does not imply pride or haughtiness, nor anything of that kind, but a gentle courtesy that will be uplifting. Even exchanges of civilities cement friendship. To be able to say kind words and few is an accomplishment that any of us may acquire. Let none of us who has not acquired the charm of a low, sweet voice and a kindly disposition grumble over lack of opportunity to improve ourselves.

True culture carries with it an atmosphere of breadth—the world and not the village. To women, more than men, is there a danger of becoming narrow; women lacking breadth, are said to betray by their conversation minds of narrow compass, bounded on the north by her children, on the south by her servants, on the east by her ailments, and on the west by her clothes. The mind grows narrow when occupied by trifles. When ignorant of our ignorance we do not know when we betray ourselves.

To sum up the matter, we should never lose sight of the fact that if we are not to be failures we must be good comrades. Our friends and neighbors and those living near us should be able to rely upon us for qualities of fidelity, faithfulness and affection which all help to make life worth living.

To be over-sensitive, to be rude in reply, or contradictory in disposition is to be altogether unfitted for comradeship, and the good comrade always has something to add to the common fund, some fun, some fancy, some bit of song, and thus the days go on in brightness and nobody minds if the road be rough.

THE CARE OF THE PERSON AND ITS INFLUENCE UPON THOSE WE MEET.

By Mrs W. R. Vandervoort, Wallbridge.

I hardly know how to commence my subject, so many ideas crowd upon me, and as time is limited I wish only to give the more important or essential points.

Let us begin by considering cleanliness of the person. 1st, Its relation to health and comfort, and, 2nd, The influence it causes us to have over others.

The Bath. The bath tub is an important article in the household; and I am sorry to say I find its importance in the country is overlooked or underestimated, chiefly, I believe, because of the inconvenience and difficulty connected with it in the ordinary farm house. There they have no room set apart on purpose for a bathroom, but have to use the kitchen or living room, and as this course excludes the rest of the family until the ablutions are over, they are too frequently, I fear, performed altogether too hurriedly to be thorough. This is more especially so during the winter months on account of the difficulty of having a warm room.

The Duty of the Skin. At the very least, once a week, just before retiring a good warm bath should be taken and an entire change of garments that have been worn next to the person should follow, for the following reasons: The skin is continually throwing off impurities through the pores. Without bathing, these pores in a certain degree, become clogged, and unable to do their duty properly. The clothing next the skin, naturally

becomes laden with these impurities thrown off. A good bath cleanses and opens up the pores and if the same garments are again put on, the skin (which performs a double duty, that of absorbing or inhaling) begins immediately to re-absorb the impurities previously thrown off, which doubtless in the long run is conducive to ill-health.

These two functions of the skin may be easily noted by any one. You have all observed at times that the skin will give off considerable moisture or perspiration, usually of a more or less disagreeable odor, caused by the impurities or waste from the system, which it contains. Now, this process is going on all the time, although we are not always sensible of the fact.

The absorbing properties are also prominently brought to our notice, especially in cases of disease contracted by contagion, which we all understand, means by contact or touch. Again—we apply a blister or liniment to relieve certain ailments. These would be utterly useless if it were not for the absorbing function of the skin.

Some people find it difficult, even although they frequently and regularly take their bath, to remove entirely the odor from perspiration. To such I would say, get five or ten cents' worth of salicylic acid from your druggist and dissolve a pinch of it in a little water, and after a bath sponge with it the parts of the body from which the trouble arises. This is an excellent remedy and cheap also, for the five or ten cents' worth will last about a year.

The Hair. In the proper care of the person it is necessary that the hair should always be neatly dressed, not as I have sometimes heard of, viz., just smoothing it on top and twisting in a knot until after breakfast. Upon rising all tangles should be removed and the hair neatly coiled or braided.

A farmer's wife or daughter is a busy woman and has no time in the morning for curling tongs or crimping pins, yet she owes it to her own self-respect and also to the rest of the family to sit down to the breakfast table neat and clean-looking.

The Teeth. The teeth should never be neglected. What is more offensive looking than a mouth full of dirty, brown-colored teeth, with remnants of the last meal still adhering to them (or perhaps from a meal partaken of some six weeks before) ? Foul teeth are always accompanied by a more or less foul breath. Neglected teeth are frequently the primary cause of stomach troubles; simply because the food left between and around the teeth becomes fermented and decays, inducing decay of the teeth; and as particles of this decayed and decaying matter are continually being carried to the stomach by the process of swallowing, after a while the poor stomach gets into trouble.

Finger-nails and Hands. It is also important that the finger-nails should be well cared for, and not allowed to wear a black band of mourning. With very little daily care the hands and nails will always be respectable looking. It is unnecessary, because we do our own work, that our hands should be rough or stained. It is because of carelessness or neglect that they become so.

Toilet Requisites. Always keep on the toilet table a bottle of tartaric acid for removing stains, a nail brush or scrub brush and a bottle of rose water and glycerine (equal parts of each or a little more rose water than glycerine, and a few drops of carbolic acid. Any druggist will put it up) or a cake of vaseline camphor-ice. I keep both. Do not just keep them on the table; they are for daily use, not ornament.

Apparel. Now a few words in regard to apparel. Those who, like myself, have to do their own work, find it necessary to wear something that will not show soil too quickly and can be washed frequently. I find a neatly-made rather close-fitting wrapper meets all my requirements. It never parts at the waist line, no matter whether you stoop, bend or reach up, like a skirt and shirt waist or blouse frequently do. Then also it is quickly donned, and the weight is all borne by the shoulders. A little wash lace around the neck or a bright ribbon at the throat adds much to the attractiveness of the gown. By all means let it be short, and have the underskirts short also.

Boots. Thick-soled boots with low heels (they need not be expensive) are

preferable for working in. They are a protection against dampness, a protection against chilliness about the ankles and the feet do not get so tired.

Minds. We should strive to clothe our minds with beautiful thoughts and ideas by giving some time to proper reading and study. If we cultivate beautiful thoughts by reading works of an elevating and refining character then will our conversation be beautiful, refined and attractive, for "out of the fullness of the heart the mouth speaketh."

Conclusion. Thus far I have endeavored to briefly outline the care we should bestow on our person—neglect these particulars and what will be the result? Lack of proper bathing means a poor complexion, a disagreeable odor of perspiration, and probably not as good health as the free, regular bather. Neglect of hair and apparel will give an untidy appearance that will not attract or gain friends for you, even if it should not be the cause of your losing the few friends you may have. Neglect of teeth and hands will only add to the already untidy effect, and neglect of proper cultivation of the mind will give a mind whose highest enjoyment is local gossip, scandal and chit-chat, destitute of refinement and culture.

Attention to the foregoing principles will make a girl or woman neat, clean, bright, intelligent and attractive. Her company will be sought after and respect and deference will be paid to her opinion and wishes, which will be in great contrast to her more careless and neglected sister, whose company is unsought, who is untidy in appearance, unattractive and unable to enter into or enjoy the higher refining things of nature.

THE HOME, AND SOME OF THE WAYS OF MAKING IT ATTRACTIVE.

By Mrs. J. J. D. Banting, Cookstown.

Recently, a London magazine sent out one thousand inquiries in the question "What is Home?" In reply there were a great many different ideas given. One was: "A world of strife shut out and a world of love shut in." That is no doubt what it should be, but I fear it is quite as often "A world of love shut out and strife within." Another answer was: "A Father's kingdom, a Mother's world and a Child's paradise," and many others much the same as these ones I have mentioned. In order to have a happy home each member of the family must do his or her part to make it so. We must be unselfish, kind and considerate one for another, always doing things for the comfort and happiness of the other members of the family, and forgetting ourselves at all times. And if each one does that there will be no doubt but all will be happy. The wife and mother is the chief home-maker.

The ideal wife's great sphere is found in her home, and if she is what she ought to be, home will be the dearest spot on earth to her. She must not think of her home and home duties as of secondary importance. The women of the 20th century are lowering the high and noble standard of the true woman.

If women of to-day devoted more of their time to making their homes bright and attractive for their husbands and sons and not spending so much time over society fads, there would not be so many frequenters of the saloons and other degrading places.

I do not mean to say by this, that her whole time should be devoted to home duties, for every woman owes something to the world, and needs plenty of fresh air and recreation for the good of her general health, but the bulk of her influence should be brought to bear upon her home. A wife should be neat, tidy and cheerful in her home. Of course there are times when this is not possible, but they should not be frequent.

Speak words of kindness to those around us; let them know our love for them. Scatter more roses while they are living and not, as it is too often the case, keep all the roses till after they have gone from us where they know nothing of our tributes of affection.

A woman may not be a belle of society or queen of fashion, but if she is kind, sympathetic and forgiving and her chief pride is in her husband, children and home, she cannot go far astray. Mothers, whether your children are girls or boys, allow them to have their friends in to spend a few hours at their homes and provide games and other pleasures to keep them from drifting away, and treat your children in such a way that they will respect and love you, making you their confident, telling you everything, whether joys or sorrows. Teach them to ever look to their Heavenly Father for help and comfort who is the giver of all good, and when you depart this life they will rise up and call you blessed.

Let us keep before our eyes at all times this motto, or text:

"Christ is the head of this house.
The unseen guest at every meal;
The silent listener to- every conversation."

CHILD TRAINING.

By Mrs. W. G. Strong, Gorrie.

Although I have never had the joy of being a mother, yet, I feel I know a little about children as I was one of a family of twelve, and at the age of fifteen I took charge of the lowest department of the Perth Public School for five years, where I had on the roll over one hundred names, and from about the same time until I came to Gorrie to live (with the exception of about a year when my husband was ill) I taught in the Sabbath School, so I have always been closely associated with children, and it has always been an interesting study to note the different ways and dispositions of the little ones.

Judging from appearances few mothers realize the importance of beginning with the infant to lay the foundation of a noble manhood and womanhood. To be sure some children are born with vicious inclinations that the best training cannot wholly eradicate, but proper training from infancy will greatly improve the character of the adult, however evil he may be naturally.

The proper time to begin the moral education of the child is six months before its birth. The mother should begin the child's training at this time by training her own mind. What she desires her child to be she should be herself during this period. During this six months she should act freely in accordance with her feelings, but she should guard against that which would tend to rouse in herself such emotions and desires as she would not wish to see reproduced as natural tendencies in her child. She should occupy the mind only with such things as are pure and good. For instance, if she be anxious for her child to be an advocate of the cause of temperance she should employ her mind with this subject daily; she should read the best temperance literature; she should make it a subject of much conversation; she should strive to rouse every fibre of her being aginst this terrible evil. Should she desire a child with a religious turn of mind, she should make this a constant subject of thought; she should study her Bible, and devote much time to the reading of carefully-selected literature treating of this subject. The best selection she could make is the Life of Christ, keeping Him constantly before her mind, dwelling upon the holiness of His character. The proper age to begin the direct training of a child depends upon the child, some children's minds being farther developed at six months of age than others at twelve months, but it would be safe to say that no child, unless idiotic, is too young when a year old to begin his moral education.

One of the first things to begin teaching a child is self-control. The man or woman who gives vent to ill-temper by throwing and kicking everything in reach, can trace the cause to having been permitted to indulge in such outbursts when a child. When a child becomes old enough to scream and kick, when not allowed to do as he

desires, he has reached the age when he should be taught self-control. When a child is showing ill-temper in this way he should be made to stop immediately. This should be done by holding him in a sitting position and thus compelling him to sit quietly, speaking to him, and not in a loud and angry tone, but quietly and firmly. After he is old enough to run about, and in anger throws himself upon the floor, screaming and kicking, he should be made to get upon his feet immediately; or, if he should throw his playthings about, this should also be checked. A child should early be taught that such outburts of anger will not be tolerated for a moment. It is a very grave mistake to allow children to indulge in fits of passion. One of the first lessons to be persistently inculcated is that of self-control. If self-control were the subject of more thought and instruction, there would be fewer lunatics in the world. If the history of more than half the insane persons in the world could be traced back step by step to infancy, there would be found the root of the evil in unchecked fits of anger. Anger grows by what it feeds on, and the oftener it is indulged in the more frequent and rampant it grows, and it goes without saying that the longer a habit has existed the harder will be its stamping out.

Obedience must be taught a child early if it be taught at all. How often we hear a mother tell her child to do a certain thing, giving the command in an ordinary tone of voice, but the child gives it no attention, even when the command is repeated, and not until the command is finally given loudly and sharply does he render obedience. The mother is wholly at fault for such a state of things. If a child be taught to obey as soon as he is old enough to understand a command he will continue to render prompt obedience in later years. The child who before obeying waits for the command to be screamed at him does so because he has learned by past experience that it is not necessary to obey commands given in an ordinary tone of voice. It was only when mother raised her voice to a very high and angry tone that she ever enforced obedience, therefore it is safe to give no attention to commands not given in a high key.

The mother who permits her children to do just as their inclinations prompt them, except at such times as she feels tired, nervous and angry, and then when a child is doing only what he has done repeatedly during the day, is surprised by suddenly receiving a smart slap on the ear or severe shaking, need never expect obedience from her children except when it is obtained by force. A mother should never enforce obedience when angry unless she has such perfect control of herself that her anger is not made manifest in either looks, speech or actions. It requires a firm steady hand to successfully rear children. A mother must herself exercise self-control if she would teach it to her children or teach them obedience. All commands or rebukes should be administered in a quiet, firm tone of voice. Scolding should never be indulged in. Wherever you find a mother who indulges in scolding from morning till night, you will invariably find disobedient and ill-behaved children.

It is unwise to make too many commands for children to obey, especially is this true of very young children. To err in exacting the strictest decorum at all times from small children is as great a mistake as allowing them too much freedom. Miniature men or women should neither be desired nor expected; but, when you do give a command, do not permit a failure to obey pass unnoticed. Do not refuse a child what he desires, and then, to get rid of his teasing and crying, grant his request. A child should be early taught that no means no, and never yes. If you have been foolish enough to say "no" when it would have been as well to have said yes, stick to it. It is granting a child's request after you have once denied him that causes him to tease and cry when he is denied, for he has good reason for thinking that such a proceeding will procure what he desires.

The child with a wilful, stubborn, disposition, will be found to be extremely difficult to manage, and his case will require different treatment than that of children whose dispositions are pleasanter. It will be found that while one person cannot obtain obedience from him without using force bordering on to cruelty, another would

have no difficulty. This is due to the difference of manner and method chosen by those who require obedience from such a child. The maner which one assumes in giving a command immediately arouses the child's wilfulness to its full extent. Such a child should be asked to do a thing rather than told to do it. Great care should be exercised that this obstinacy may not be roused, but kept as inactive as possible, for wilfulness will be sure to strengthen with use, and the child's will already predominates over his other faculties, and it should not be brought into activity; and in after years what was once stubbornness in the child will be only a healthy strength of mind and purpose in the man or woman.

When the child refuses to obey, it is much better to make no attempt to enforce obedience. For example, should you tell him to pick up a plaything from the floor, and he refuses to obey, do not insist upon his doing it, and do not repeat the request. Do not say anything, but pick it up yourself and then without in any way manifesting anger proceed to administer some punishment—something unpleasant enough to make him more careful to obey in future. Do not frequently administer corporal punishment, whatever the disposition of your children may be, and, in some instances, we would question the wisdom of employing it at all. Be sure that a child shows decided improvement in behavior after receiving a whipping and that nothing else would have given the same result, and then let a whipping be applied so rarely and smartly that it will be something to dread. At first, when a child is very young, in order to make it understand the necessity of obedience, it seems often times necessary to apply slight spankings, but in a short time such punishment may be laid aside with profit, only whipping a child when every other means has failed. It is a suggestive fact that the child to whom a whipping is an everyday occurrence, seldom obeys without it. Never punish children by shaking them or boxing or pulling the ears. Such punishment rouses the child's anger and does much harm.

If you wish to have your children grow into plucky, independent men and women teach them self-dependence. Do not do for a child what he can do for himself. Do not wait upon your children or permit others to do it; it makes helpless puppets of them and causes them to grow up into useless men and women, rather teach them to wait upon others. Do not run to pick up the little tot and pity and coddle him every time he receives a bump, instead, when he is only slightly hurt, tell him not to mind, but jump right up. This treatment will help to harden him for the storms of life in after years. Never attempt to turn the child's mind from his hurt by pretending to scold the object upon which he received his injury, saying, for instance, "Naughty chair to hurt baby," and striking it with the hand or whip as many unwise parents often do, for this course is the first lesson in violence and cruelty. Show children by example, as well as by precept, how beautiful truthfulness is, and how lovely kindness is, and they will get to love these virtues and practise them. When they are especially kind reward them by your warmest praise and approval, for all human beings with warm hearts love approval and appreciation. The child's tendencies should be carefully watched and everything in him which appears vicious or unpleasant should be nipped in the bud.

If a child is cruel and domineering to its little associates it should be sternly reproved and taught to behave gently and kindly. Boys should be especially taught to be tender and chivalrous to all girls and particularly to their sisters. Children who treat their pets roughly and cruelly should be deprived of them. No right-minded person places a little, helpless dumb creature in the complete power of young children who are cruel, through ignorance or through a vicious nature. The treatment of pets should be watched by the mothers of children having them. Watch a group of children while at play. Even the refinement of a pure home is not a sufficient antidote for the poisons of the unguarded play. Something goes amiss and they begin to quarrel. Did you imagine that the smiling lips of your neighbor's sweet-faced, blue-eyed girl could give utterance to such naughty words? or that yonder bright-eyed, manly-looking boy possessed such an uncontrollable, unreasonable temper? Your

own boy and girl. If allowed to play unwatched with such children, will soon know and use them same words and give evidence of an equally bad temper. A few words kindly and wisely spoken at the right moment by a watchful mother would have calmed the troubled little souls and perhaps taught each of them a needed lesson in patience and unselfishness. There is no time when a mother can watch her children with as much advantage to herself and to them as while they are at play.

We hear a good deal about "woman's rights," but there is one field of work to which woman holds undisputed possession. I refer to the care and training of children. It is a most important and honorable work. We should educate and train the hearts and consciences of the children so they can discern right from wrong and have that moral courage necessary to stand up to their convictions, and to mothers falls this great responsibility. Then of what vital importance it is that we have a well-trained and disciplined heart and conscience. How are we to obtain this training? Every time we overcome the irritation caused by annoyances, of which no one knows as well as a mother and housekeeper, we are progressing and are better able to cope with the next one. Our daily and hourly trials are a part of our training! "He knoweth the way I take and when He has tried me, I shall come forth as gold." If the children hear us constantly fretting, how can they help falling into the habit? We must "Press toward the mark of the high calling of woman."

A friend recently said to me, "One gets narrow and mean living the life I do, no society or companionship except that of my baby and an occasional glimpse of my husband, I feel myself a nonentity." What a mistake that mother makes in saying so. In the few months she is shut up with her baby is her opportunity to do something toward her own uplifting, for surely no sensible woman would spend all her time in caring for one baby. She was once a fine musician, but has let it all go, for she says, "No one cares to hear me now." It is her duty to do the best she can for herself, not only for her good, but for the sake of husband and child. It does not pay, dear mothers, to let every little accomplishment and grace of mind and person drift away from us without trying to keep them. We shall not always be taking care of babies, but when I am through I want my children to see enough loveliness in mother to still yield her respect and admiration as well as love. We should constantly keep the future before us and the time when these babies can appreciate our work, both for them and for ourselves, and it will surely have a refining effect upon them.

Take five minutes every day and retire from the world. It will benefit you and your family. Give a little attention to the joys and sorrows of the children. They enjoy anything much more if mamma is interested and if we take the time we can almost always straighten out their troubles for them. "Therefore let us lay aside every weight and the sin of fretting which doth so easily beset us and run with patience the race that is set before us." "Finally, whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are of good report, if there be any virtue, if there be any praise, think on these things," and teach the children to think on them also.

In the great scheme of life each individual has her own work waiting her doing. I cannot do your work and you cannot do mine. If you or I by negligence do not do our share, ten thousand millions of willing souls cannot do the very smallest part that was ours to do, but which we left undone, and when the last great assize is called we shall have to answer for every sin of omission that stands charged against us.

How beautiful is a sound and perfectly developed body. How tender and sweet and altogether lovely a sound and perfectly developed soul! By perfect, I do not mean complete, but rather true. Is there any greater work than the feeding of these tender little soul-buds until they shall have blossomed into maturity? That no blight shall touch their beauty, no silly or coarse soul brush from the petals the dew of innocence, no rough wind disfigure them, no heavy hand give them pain, or thoughtless mind shut out the sunlight, you will need to give them abundance of such food as

Jesus gave to the multitudes that thronged Him, and that was sent to the children of Israel during their wanderings—manna fresh from heaven every day. This is the "bread of life," and to hold in mind that it must be given every day is half of the secret of soul nourishment. A blessing asked for over the flour barrel will not dispense with the necessity of asking a blessing over each loaf that the flour is made into.

Oh! dear mothers and fathers, do not feed your children's souls with hate and envy, greed and love of self. Be careful not to teach them these things by example or by precept. Do not let them see that you prefer your own pleasure before others, that you are thoughtless of other's sufferings or deaf and blind to other's needs. Teach them Jesus' life and show them you are trying to live it. Show them that you feel only love and pity for all of God's children and kindness towards all His creatures, and joy in all His grand and beautiful works. Show them your sympathy with all suffering, your aid to all helplessness, your pity for all wrong. If your children find you busy saying and doing such things as will comfort and cheer and help others you will not cultivate that sensitiveness that grows by constant consideration of self, as to whether people are saying and doing to them just what they ought. This is a common mistake that makes many lives miserable, and if persevered in, these lives come to be made of the sayings and doings and supposed thoughts of other people toward them. Teach them by example and a few words to see only the good in everyone, to ignore the wrong, and to do and say the kindest things in the kindest way they can think of. A child whose mind is so directed will respect all, and think of the real person, rather than of his dress, his features and his manners. If you let them fill their minds with the faults and appearances of others, they will despise and ridicule them, and miss the good. If their minds are directed to the real and the really beautiful in each, they will approach people with thoughts and feelings that will speak to like thoughts and feelings in others and draw out to view as the sunbeams draw out the blossoms. So will children be taught respect, consideration and ability to see the good and beautiful in everyone. When their little playmates are disagreeable or lose their tempers, they can be led to forget their own personal feelings and to consider only what they can do to restore harmony and make the little playmate happy. If they see you handling the Bible with reverence, loving to read it, speaking God's name as of one you reverence and love and speaking about Him as one to be trusted in all things, if they see that in all the contrarles of life you rest in this trust, nothing doubting, you will give your children soul food that will do more for them in this life and the next than all else that is possible to do. Whatever else has to be neglected do not neglect to feed the children, body, mind and soul.

TRAINING OF CHILDREN AT HOME AND AT SCHOOL.

By Miss E. Shea, Beatrice.

"Blessed are they who do hunger and thrist after the knowledge of how to direct, instead of suppress, the spontaneous activity of childhood, for they shall make happy, competent and virtuous children."

Gaining Confidence. One of the first things necessary to gain the confidence of the children is to show confidence in them; to believe them; not to suspect them; but to take it for granted that they will do right. All children like to make confidants of some one. This confidence cannot be forced, even in the case of a little child, any more than a flower can be forced to bloom by picking open its petals.

A child's nature closely resembles a flower in its sensitiveness and development. Parents should never compel their children to give confidence. Children should have their own little plans and at the same time they should be taught to defend them. It is no uncommon occurrence to see a boy or girl fixing up a play house. They each have their own plans for putting up shelves, hooks, etc., and in their unguarded

moments they confide their plans to their father and are at once advised by him to change the whole plan. The result is that the next time they will keep their plans to themselves. In doing this they find refuge in concealment and thus destroy the element of frankness which is such a beautiful trait in the young. We should approach the children in their planning with such a spirit as will enable them to offer us a place in what they are doing. We can watch their work and give a suggestion here and there which will be accepted kindly, and in the end we may have enabled them to see something which they would not have seen unaided.

Parents should never promise their children anything unless it is an absolute fact that they will give it. You will very often hear a mother say to her little daughter. "Now, Mary, I am going to town next week and if you are a good little girl, and mind little Harry while I do some work, I will buy you a doll." The little girl's face is beaming with joy at the idea, she rocks and takes care of little Harry from morning till night, but by accident little Harry gets a fall, what is the consequence? You may depend the mother is quite angry and little Mary gets a bad scolding and to make matters still worse, she tells her politely that since she has acted thus she will not get her the doll. How cruel! Was it Mary's fault? No. Her little arms were not strong enough to hold Harry. She had done her best and still received no credit. Little Mary is very much disappointed, and you may depend she will never have the same confidence in her mother or in any other person who would act thus.

Parents will very often give their children a lamb, colt or some other animal to have and take care of for their own. For example, a father gives his son a lamb. The boy takes a special delight in feeding it, while at the same time he is planning what he will get with the proceeds when he sells it. The time comes after long and careful feeding when the lamb is ready for market, the butcher drives up, takes the lamb and gives the pay to the father. The little boy looks on with wistful eyes and wonders why the butcher did not give the pay to him, but he feels quite til night, but by accident little Harry gets a fall. What is the consequence? You may judge what follows. The father simply puts the money in his pocket and says no more about it, and the poor child is too timid to speak to his father and ask for his rights. What is the consequence? The boy silently glides away and when he has reached a spot where he thinks nobody will hear him he has a hearty cry. Poor boy! he is discouraged in every sense of the word. Perhaps this may be an act of thoughtlessness on the part of the father, but this does not make it any easier for the boy.

Keeping Children on the Farm. It should be the aim of every farmer to keep his children on the farm, as there is no position more honorable than that of a farmer. Some of the so-called farmers reply, "Well, they won't stay on the farm!" One replies, "There is that John of mine, who said when he left me that he had worked his last day on the farm. And then there is Mary Ann, what did she say? She said she wanted to earn money for herself and that there was no show of ever making any on the farm. So they went." And then this farmer wonders why his children have left the farm. The reason is he never gave them any encouragement to remain. Children need encouragement as well as grown people. Give the children something for their own. Let them raise and take charge of it, and when the time comes for selliug it, let them sell it. Do not let them run away with the idea that there is no money in farming. It does not cost much to get children interested in the farm and not only that, but they also see that farming, if properly done, is a money-making busiuess.

The same rule in regard to the confidence of the children will apply to the teacher. Children should have confidence in the integrity and uprightness of the teacher. The surest way for a teacher to render her pupils worthy of confidence is to trust them. Let the pupils know that you expect them to act honorably and they will generally do so. They will appreciate at its true value the vigilance you may find it necessary to employ in guarding them from evil and you will have the satisfaction of

seeing them grow up into open-hearted, generous boys and girls. Suspicion is the mark of a weak, cowardly dispositon. It can only produce falsehood, injustice and treachery. We want our Canadian youths to grow up with the constant feeling that they are expected to do right, and for this reason are trusted by their teacher.

Duty of Parents to Teacher. Parents should help and sustain the teachers in their work. They should impress upon their children the duty of respectful and cheerful obedience. For any parent to discredit a teacher is neither wise nor just. Easy control is out of the question when parents are so forgetful of the welfare of their children as to make disparaging remarks of the teacher. Parents should have their children attend school every day possible, as irregularity is a hindrance to both teacher and pupils. Also train them to the habit of punctuality. Instil in children these habits, and when they are old they will not depart from them.

Obedience. Children should be trained to obey through love and respect, not through fear. Young children must be trained to do what they are told to do before they are competent to understand the true value of obedience. The teacher or parent must in every case understand to what extent it may be safe to allow a pupil to act on his own responsibility. It is a mistake to make threats and constant entreaties. Children should obey directly through a sense of duty. The child who refuses to obey directly when spoken to should be dealt with promptly.

Truthfulness. Truthfulness has been called the central pillar of character. The way to make children truthful is not by set lessons, but by constantly cultivating habits of truthfulness. They should feel that they can be trusted. Falsehood when made clear should be followed by suitable punishment. Untruthfulness is often the result of fear. This should never become the governing agency in promoting truthfulness. The parent or teacher who cannot look down into the heart of a little child and understand its conflicting emotions has much to learn. Parents should never allow their children to be discouraged, as it leads to mean, sneaking habits.

Neatness. Neatness is a personal virtue. "A place for everything and everything in its place" is necessary to both parents and teacher. A slovenly way of attending to duties shows a lack of culture. Children should be taught from early infancy to be neat.

In very many of our homes you will see the boys and girls come in from their work, throw their mitts in one corner, their caps in another and their coat in another. This goes all right until they want them and then it is, "Mother, did you see my cap?" "Jack, have you my mitts?" etc. The house is in a perfect uproar before everything is found. Now this disorder could all be checked by having hooks in reach of the children and by seeing that their clothes were always hung there when they came in. A better plan would be to have a hook for each child and to see that it was used by that child only. Children should always be expected to keep their faces and hands clean, their clothes tidy and their hair well kept.

As for neatness at school, a well-conducted school fosters habits of neatness. The teacher's desk, the pupil's desk, the apparatus, the school room and grounds should be models of order and neatness. A schoolroom that is dirty or untidy from waste-paper, apple cores, etc., shows indifference to the formation of character. The pupils being trained to habits of order in the schoolroom will be prepared to carry their orderly habits through life.

OUR BOYS. HOW SHALL WE EDUCATE AND INFLUENCE SO TO KEEP THEM ON THE FARM?

By a Member of North Grey Women's Institute.

It is a curious proof of a certain quality in the human mind—sometimes called discontent, sometimes mildly named "love of change,' that while many who dwell in cities pine for the seldom-enjoyed country, those whose beautiful homes are amidst the

woods and the hills and streams often are in haste to leave them and take up their abode in the city. Why is this the case with so much to make life in the country healthful, pleasant and profitable? Why is it that so many of our boys rush to the towns and cities to become too often a failure as business or professional men? I have asked myself the question "How much has home life to do with this state of things? How much blame lies at our own door and what can we do to prevent the frequent recurrence of the difficulty; what can we do as parents and what can we do as sisters?"

I am well aware that many of the young men who go out from the farm into other walks of life, are eminently successful. To-day farmers' sons are filling some of the best and most responsible positions in business and professional circles, and some of our most talented ministers are those who took their first lesson in agriculture from Nature's text-book, while they were faithfully performing their duties as farmers' sons.

This opens up a wide field for study, and the intelligent lad of twelve or fourteen, who has spent his time industriously on his father's farm has become posseseed of a tolerably thorough knowledge of many useful things of which the city boy is entirely ignorant. It seems to me there is a tendency among farmers' boys to underrate their position. There is a certain class of young men who assume an air of superiority and talk vaguely about the "poor farmer," until the farmers' boys begin to think that their position is an inferior one. Such remarks contain a covert sneer at the farmer, which, though some have spirit enough not to be influenced by, yet others who are of a more yielding nature cannot resist, and become discontented. If they mean that we are not possessed of riches, perhaps quite a number will have to plead guilty to the charge, but "wealth is not worth" and "poverty is no crime." On the contrary it has frequently been a blessing. While riches have been the ruin of many a man, the necessity to work has been the salvation of many. It has called into action talents that otherwise would have lain dormant, and some of man's best energies have thus been developed. Ability and necessity lie very close together.

We should endeavor from early childhood to inculcate in the minds of the boys a correct idea of true respectability. While I would not have them think of themselves more highly than they ought to think, I believe we should impress on them more emphatically than is usually done, the fact that our calling is a high and honorable one; that we as a class are not people to be looked down upon, pitied and patronized, but intelligent men and women, able to take our place in and do honor to the community in which we live.

Then we should educate the boy who is to stay on the farm with a view to fitting him for the work. Some say that education spoils the boy and makes him dislike the farm. I confess that I cannot see the matter just in that light. I think, however, there is a mistake made in giving our boy over entirely to the cramming process. During his early boyhood and parallel with his scholastic training, he should be taught to do practical work on the farm. If our boy has done such work well (his appointed tasks) let us speak encouragingly and tell him so. We are not usually afraid to tell him if he fails; we do not as a rule scruple at pointing out to him his defects. Why not then be equally prompt in meting out a few words of well-merited praise. Never compare him with other boys in such a way as to make him suffer by the comparison.

As he grows up we should do all we can within our means to gratify his tastes and inclinations as to the working of the farm and in improvements in buildings, so far as tastes and inclinations are compatible with proper economy and good judgment. By these means an interest in the occupation he is to follow through life will be excited, which will increase with his strength and the development of his mind. We must remember that our boy, though our own flesh and blood, has an individuality of his own. The influence we have exerted over him in his early childhood and youth has no doubt moulded his character to a certain extent, has helped to form his likes

and dislikes and directed his thoughts into certain channels. But, notwithstanding this fact, he is a separate personality with a will of his own and thoughts and opinions of his own which we, though his parents, should respect as much as those of a stranger.

Then I think we should try to keep pace with the times so that we can enter more fully into the thoughts, feelings and desires of our children. As we grow older there seems to be a tendency with most of us to live in the past, while our children are living in the present. We are apt to argue that what was good enough for us twenty, thirty, or forty years ago when we were young, is good enough for our boys, forgetting the changes which time has wrought and that our repuirements were as fully met when we were young as those of our children are now, or perhaps more so.

With these few remarks regarding his education, let us for a moment consider how we can influence him as mothers and sisters. What can we do to make home pleasant for the boy, who has chosen to stay on the farm, so pleasant that he will not become discontented and wish to leave the dear old home to pass into the hands of strangers? I wonder how many mothers and sisters as they have yearned for some absent one have asked themselves the question, "Did I exert myself and endeavor in every possible way to make for my boy, a home which was to him the dearest, pleasantest, coziest spot on the face of the earth, the place above all places to be desired? Such is just what home ought to be, whether the sheltering roof be that of a palace or a cottage, and with few exceptions it is within the power of mothers and sisters to make it such.

We know that sometimes the girls, as well as the boys, are dissatisfied with country life. We are not going to discuss that side of the question just now, but presuppose that the girls are perfectly satisfied with the little corners of this beautiful earth where Providence has placed them. An eminent writer has said, "Not one-half of the people know how to make a home." To learn this art is one of the greatest and most useful studies of a woman's life. We should have everything about our home as bright and attractive as possible. In order to do this it is not necessary to have costly adornments, velvet carpets, tapestry hangings and endless bric-a-brac. They are not essential to happiness and comfort. Expensive trappings, like luxurious viands, fall to the lot of the few, not the many, of our land. However, we should study to make the most of our belongings and arrange our rooms in the most tasteful manner possible. Usually boys appreciate a neat, tidy room, and I believe their behavior is much improved by it.

In our work of making our homes attractive we should not forget the kitchen. We talk about the influence of the press and of education, and of the influences of a vast number of other things, but at present I would remind you of the influence of the kitchen. The kitchen is really the heart of the home and although I do not advocate living entirely in it, yet in rural districts it is often the most frequented room in the house and should be the most cheerful. It is the room around which the memories of childhood seem to cluster. There is no doubt that some present, upon whom Father Time has left his touch, have tender recollections of the spacious home kitchen with its scrupulously clean sanded floor, its wide fire place with the singing kettle standing on the hearth, its blazing wood fires in the light of which you built your fairy palaces, the shining tins hanging on the wall of whitewashed logs and pervading everywhere the odor of savory dishes, which the busy but loving mother is preparing for the coming meal. Such scenes we love to look back upon, and many of the impressions received in the old home kitchen will be carried with us to the end of life, and many of us feel we are better men and women for the early impressions, although our means for adornment may have been limited.

We should remember it is not always the most expensive articles which are the neatest and prettiest. The work of ornamentation of our homes should extend beyond the four walls of our dwelling. It is not much trouble to raise a few hardy annuals or keep in order a small collection of geraniums. A few well-kept flower beds

add greatly to the attractiveness of our homes. In whatever circumstances we are placed we should always endeavor to be contented and cheerful, and always have a pleasant word for the boys. This is no doubt more easily said than done, for the average boy is often a trying institution. Still we ought to strive to attain this state of perfection and never by word or look cause hem to feel that they are in the way, but on the contrary impress upon them the fact that their presence in the home is necessary for our happiness. Help them in their games and innocent pastimes, making home pleasant for them. Then they will not seek entertainment elsewhere.

Be quick to render little sisterly attentions, such as keeping their wardrobes in order, and not too quick to chide if occasionally a stray collar or tie be found out of place or the print of a soiled boot be left upon the scrupulously clean floor. There may come a time when you will long to see the footprints of your brother, but look for them in vain. We should attend carefully to the physical wants of the boys, even going so far as to consult their likes and dislikes in culinary matters. No matter how plain the meal which is served let it be well cooked and wholesome, and spread upon a covered table with a clean cloth, in a neat and orderly manner, and not in any-way-will-do fashion. No girl's education is complete until she can not only properly cook and serve a meal, but knows how to perform every other duty which falls to the lot of the housekeeper, which is essential to the happiness and comfort of her loved ones. Such work is not drudgery, it is a vocation. It is not degrading. Canon Farrar says, "A life spent in brushing clothes, washing crockery and sweeping floors may yet be a life so ennobled that for the sake of it a king might gladly yield his crown." The women of our rural districts, notwithstanding the numerous duties which fall to their lot, are by study and practice making their homes attractive to their sons and brothers, a place to be desired above every other place, and doing a work and exerting a moral influence which will be felt for years to come.

HOUSEHOLD ECONOMICS.

By Mrs. Colin Campbell, Goderich.

Among the hopeful signs of progress now before us none are more encouraging than our rapid development along the lines of household economics. Those intricate and valuable services performed in the home are no longer left confidently to untrained hands and untaught heads.

Household Economics cover all subjects which relate to the location, architecture, furniture and sanitation of the house, the proper food, clothing and exercise for the individual and the conditions of life to which these are a means. We have come to see that this work is not merely service, but an art, based on scientific principles. Certain phases of this subject should form part of the education of every woman and every man. No one can afford to-day to be without at least an elementary knowledge of sanitary science. No one can afford to be ignorant of those principles which make the home happy, healthy and elevating, nor of the forces which are working against it or for it.

Training for the Home. It is repeatedly said that the teaching in our schools should find closer application to the home. The problem is how to make this application. The home demands the very highest intelligence and training. The schools and colleges have certainly an important place in the training of women for home-makers.

Education includes more and more the development, not only of the mind, but of the directing capacity of the mind, to qualify women to take their place in the actual daily life where their lot is cast. The average college-trained woman cannot fairly be charged with inefficiency when she has undertaken the superintendence of a home. Her management has been above the average in sanitary conditions, in the

moral and intellectual training of the children and in all that makes for the high ideals of life. Yet no one can doubt that her life would be more useful, that she would pay fewer premiums to experience, if she had been taught to apply her science to home affairs. The training that will conduce to make a woman the best wife and mother is that which will enable her to impress on the minds of those committed to her care true and noble ideals of living. The life work of the great majority of women will always be in the home, and there she has power to mould the character of the future men and women.

Sanitation in the Home. Every woman should have a knowledge of sanitation at her command. Many diseases may be prevented by attention to sanitary measures. This means, first, the free use of the two great natural disinfectants, pure air and sunshine; second, the quick removal of refuse. Sanitary law is often flagrantly violated by throwing into the yard the dust gathered when sweeping a house. Possible germs of disease are removed if all dust is burned, and all clothing and rooms are kept constantly disinfected by air and sunlight.

Medical men tell us the present prevalence of consumption is due largely to a lack of sanitary precautions in the past. The soil, houses and clothing have all been infected more or less, and years of education will be needed to teach the proper methods for the prevention of the disease.

With well water there is a series of dangers to be avoided. If a well be shallow and fed by surface water, all the impurities of the soil will be found in it. It is said that in very loose soils a well of sixty or eighty feet deep will drain a large area, perhaps as much as two hundred yards in diameter, or even more. All wells and cisterns should be inspected regularly. Wells should be securely covered, so as to prevent substances being washed down from the surface. They should be at a safe distance from cesspools, and the drainage should be away from the wells, instead of towards them. No sewer should be allowed to pass near a well, and no well near which a sewer passes should be used. The well is usually dug near the kitchen door, probably between kitchen and barn. The drain, if there is a drain from the kitchen, conveys the dirty water of wash-day and all other days, which sinks through the ground and finds its way to the well. Very often liquid impurities from the barnyard percolate the soil and help to contaminate the water in the well. The water may be perfectly clear, nevertheless, you drink a foul poison, slow in action, it is true, but making every fibre in your body ready for diphtheria, typhus and consumption. The sum of all sanitation for the home is this: see that no open cesspool or drains poison either air or water about the house.

Ventilation. The necessity of pure air in our homes cannot be too strongly urged. Sanitarians agree that pure air is the first essential for a healthful home, and its importance should secure for it the careful attention of every housekeeper. Our houses ought to be abundantly supplied with fresh air. The supply of fresh air should be in proportion to the quantity consumed. As a house is not open to the air, its ventilation must be artificially provided. In the ordinary home of the present time the use of the windows has to be depended upon more or less for a quick change of air. In houses almost constantly occupied, the window openings become necessary. A screen can always be used to shut off direct draught if there is danger of harm. The three essentials of all ventilation can be summed up in a few words. Firstly, to provide an abundance of pure air in all parts of the house; secondly, to avoid draughts, either hot or cold; thirdly, to provide means of escape for all foul air and odors.

How shall we make our homes more comfortable, more healthful, and secure these blessings by the least economic outlay? There is no progress without much struggle and disheartening discouragements, and in my tours through the country I find the greatest obstacles to the success of these efforts are the apathy and indifference of those most in need of help, the large army of housewives. Some will say they are too old to learn anything new, and the beginners are so much occupied with their household work and social requirements as to postpone or neglect scientific

economics. Those who do the work as wage-earners will naturally follow the example and directions of those who employ them. This is the most serious obstacle in our way, but we must only work a little harder to present the advantages of true household management, if we would secure the co-operation which will introduce into every home a right way of living and enjoying life. The demand for home science training is growing, and growing rapidly. Our leading educators are coming to believe more and more that this demand is a legitimate one, and are preparing to make provision for such instruction.

Q. What do you consider of first importance in the building of a house, from a sanitary standpoint?

A. Mrs. Colin Campbell, Goderich. Location and surroundings.

Q. Why would you be more particular about the cellar than the parlor?

A. Much of the air which enters the different rooms of the house comes from the cellar. The air of the cellar makes its way into every part of the house.

Q. How may we prevent the deposit of moisture upon the cellar walls in summer?

A. In very hot summer days the windows should be closed during the day.

Q. Would you recommend sleeping in the open air in summer?

A. Sleeping in the open air is one of the prescriptions for consumption, and if it cures that disease why should it not also prevent?

Q. Why do you prefer electric light to the ordinary gas light or kerosene lamp?

A. All combustion uses up oxygen and produces carbonic acid gas. With the exception of the electric light all artificial illumination of the rooms is a great tax upon the air supply and upon the means of ventilation. It has been estimated that one ordinary gas jet will consume as much air as two people, and a kerosene lamp will use as much as four people.

Q. Which is the better temperature to keep a house, 65 degrees or 70 degrees?

A. If a house could be evenly heated at 65 degrees Fahrenheit people would be healthier than at a higher degree. The chief advantage of a heat of 70 degrees is that it can contain more moisture than a lower one.

Q. How should upholstered furniture be made?

A. Without tufting, so that it can be thoroughly cleaned by brushing.

Q. How can furnishings injure health?

A. By preventing free access of light and air, and by forming catch-alls for dust.

Q. How should the ideal house be ventilated?

A. By means of flues.

Q. Are windows not ventilators?

A. Windows are made for the admission of light and for an occasional thorough change of air, but are not ventilators.

Q. How often should all living and sleeping rooms be aired?

A. They should be thoroughly aired at least once a day.

Q. Should the well be used for cold storage?

A. The practice of hanging dressed meat and poultry and milk cans in the well should never be tolerated.

Q. What are your most serious objections to elaborate furnishings?

A. They are agents to minister to our comfort or our pleasure, but when proper care cannot be given to such furnishings let them be sacrificed on the altar of cleanliness. Let each housewife be mistress of her furnishings, else she will be their slave.

Q. Why not use a feather duster in dusting?

A. Miss Laura Rose, Guelph. Because instead of gathering up the dust it only scatters it. I like to use a large, soft cloth, which I can take to the door and frequently shake.

SYSTEMATIC HOUSEKEEPING.

By Mrs. A. Beck, Goderich.

In order to become a systematic housekeeper or be successful in any business we must make it a pleasant duty. Aim at perfection. Have for our motto, "What is worth doing is worth doing well." Ambition, energy and perseverance are beneficial. Have a place for everything and see that everything is kept in its place. Retiring early at night and rising early in the morning places the housekeeper in advance during the day. Before baking or cooking, much time is saved by having the material on hand and proper utensils to work with. The secret of your success in baking will be a good hot fire. A very helpful system is to time yourself while doing your work. Buy a good article, it will prove to be the cheapest in the end. For eating it will taste better, for wearing it will last longer and look better, and for your house you will take more care of a good article than a poor one.

I fail to find a systematic housekeeper who is absent from her duties five days out of six. I am speaking in particular of a woman who manages her own house and home and does her own work. Washing early in the week, Monday if a fine day, gives a good start for the week. Then iron and bake bread on Tuesday. Wednesday is a very good day for cake baking. Go over the house with the carpet sweeper and dust up, wipe off kitchen floor on Thursday, sewing or mending, shopping, visting or calling. On Friday, thoroughly sweep and dust the main part of house, wash windows, clean cupboards and silver,, order in groceries for Saturday morning. On Saturday have a general clearing up and preparing for the Sabbath. Some women have the vague idea that housekeeping is not so ennobling as to be a fine musician or painter or needle worker. Stop and think if the happiest homes are not where the best housekeeping is done. Housekeeper, feel that you are occupying one of the highest professions on earth and doing as much good in the world and fulfilling the mission that God has given you, as the best temperance lecturer. In fact, if home duties were a little more properly cared for, there would not be so many unhappy homes to-day. Let us aim at making our homes more attractive and pleasant.

Much satisfaction is derived from keeping a daily account of your expenditures and often avoids disputes with merchants. Be moderate in your dress. If you cannot afford all the home comforts and dress too, do without the dress. It is well to have some knowledge of dressmaking and tailoring. One often gets more wear from a made over article than when new. Be a fond, loving mother, but do not spoil your children by not teaching them how to be good housekeepers, modest and obedient.

Systematic housekeeping is one long life-time experience, learning something new every day and keeping in practice the knowledge you have gained in the past. The better way would be to take one subject at a time and thoroughly discuss it. For instance, house-cleaning is one of the important duties of to-day. Having some experience in that line, I do not favor upsetting the whole of the house at once, but prefer taking one room at a time, commencing at the attic and ending at cellar or back kitchen.

THE PROFESSION OF HOUSEWIFERY.

By Miss Josie Speedie, Muskoka Falls.

When a woman takes upon herself the duties of housekeeper and home-maker she enters upon a profession quite as important and dignified as any other. It requires brains and muscles, executive ability and concentration of purpose, a comprehension of many arts and sciences and a knowledge of more trades than all other professions taken together. If our young housewife has been trained in housewifely ways by a careful mother she is indeed fortunate, but if she has not, she has no reason to be

discouraged, for with a comprehension of the importance of her profession and a determination to succeed, she will soon find herself on the highway to successful housekeeping and home-making. It is a good thing and a blessed thing to be able to build up and maintain a fair, sweet and harmonious home, and there is no calling on earth that is higher or better or more satisfying than that of home-maker.

Good housekeeping does not always mean home-making, but home-making always means good housekeeping in the best sense of the world. Eternal vigilance must always be the price of good housekeeping, but a continual round of drudgery it need not be, if the work is planned systematically and performed intelligently. Good housekeeping means health, happiness and comfort to the entire household, while poor housekeeping means discomfort, discord and unhappiness. Even if a housewife is not obliged to do her own work, it is essential that she should know how it should be done, then if she is fortunate to have competent help she will appreciate the service rendered. There should be mutual confidence and respect between mistress and maid. There is said to be something essentially vulgar in any woman, whatever her opportunities may have been, who despises home-making; tasks which the wisest, best and most cultured women have delighted in.

The housewife must be able to make a practical application of the science of chemistry to common every day cooking; she must comprehend the laws of sanitation, and appreciate the hygiene of cleanliness; she must have a good knowledge of the care of all kinds of meats; must comprehend the mystery of compounding sausages and rendering lard, have a realizing sense of the merits of butter and cheese. She must also understand the nutritive value of different kinds of food and be able to furnish her family with well-balanced rations. She must be able to cook and serve a wholesome dinner and at the same time be competent to preside over the same with dignity and grace. She must be an adept at making, mending and nursing. She must be a financier and a general all-round business and household manager. You know we often hear it said that some women have a genius for housekeeping. Some one has defined genius "as the power of persistence." When a housekeeper becomes disheartened over the small daily trials, or is perplexed and worried over problems that seem hard to solve, she must remember that perfection in any profession requires time, study and practice, and a perfect system of housekeeping must be a gradual development.

At first there may be mistakes and discouragements, but with patience and persistance the plucky housewife will soon find herself mistress of the situation; the household machinery will begin to run smoothly and tasks which at first seemed hard will become simple and easy.

Through practice the brain will become quick to concelve and comprehend, and the hands deft and clever to perform all the tasks that make for the up-building and maintaining of that most beautiful and enduring earthly structure, a true, harmonious home. Wherever you find such a home you will be sure to find a patient, intelligent and loving housewife as its maker.

CONVENIENCES IN HOUSEKEEPING, OR HELPS IN THE KITCHEN.

By Mrs. Wm. Allen, Stella.

My subject will not have much interest for those who live in what Mrs. Scott has called "a well-appointed house," for that house should hold all the modern, up-to-date conveniences, but we do not all enjoy these comfortable homes. Our fathers' ideas of comfort and convenience, when building twenty or thirty years ago, were different from ours to-day, and it is more especially in the old houses that the housekeeper needs to study and make her own conveniences and save extra steps and work for herself, for in Amherst Island, as in many other places, one of our greatest needs is mothers' help. Hired help is hard to get, even for those who wish to keep it. As

for our own girls they are soon transplanted to homes of their own and the mothers are again without help.

Of the larger conveniences I will say little, as the washing machine, clothes wringer and barrel churn are now almost as necessary as the sewing machine. The butter worker and charcoal iron are growing favorites. The small flour sifter that holds about a quart and turns with a crank, when kept in a dish of flour on a shelf in your cupboard, will save many an extra step, if your flour barrel is at a distance. If the same shelf can hold the rolling pin, biscuit and cake cutter, baking powder, soda, cream of tartar and spices, it is almost as convenient as the much-praised kitchen cabinet. A pie lifter saves washing of holders and dish towels. The egg beaters are many, but I like none as well as the wire spoon. It can be used also in place of the perforated spoon or clipper for stirring cream.

A small bag or square of cheese cloth can take the place of the wire soap shaker and of the grease strainer and is more satisfactory than either.

No patent dish washer has yet been invented that can replace the old-fashioned two-hand one, nor does the chain "Yankee" dish cloth, nor the stick with a mop on the end, do as good work as a yard of cheese cloth.

Who has not wished for a raisin seeder about Xmas when fruit cake or plum pudding are in season? They are, however, rather wasteful, as much of the pulp goes with the seed. When using the rotary cake cutter the paste or dough rotates as fast as the cutter. The serrated knife for cutting hot bread or cake is a real comfort.

Empty baking powder cans make good home-made salt, pepper and flour dusters if you perforate the lids with a fine wire nail and hammer. Keep them on a shelf beside or behind your stove. In or around that shelf have plenty of hooks and nails to hang the long-handled spoon, the measuring cups, skimmer and everything you need to use on the stove. A wire holder to hang the broom and mop in, when not in use, is found very convenient; also a fitted cover of canton flannel for the broom, for use when sweeping walls or ceiling.

Then there is the steam egg poacher, the double boiler for rice or porridge, the wire basket in which to put eggs for boiling or crullers when cooking; the small potato press for a dainty dish of potatoes, and many others which might be mentioned for use in other parts of the house.

A CONVENIENT KITCHEN.

By Miss Josie Speedie, Muskoka Falls

A convenient and comfortable kitchen is what every housekeeper should have. It should be on the same floor as the dining-room, as steps between these two rooms often cause accidents as well as make many unnecessary steps in a day, and most women who do their own work find there are steps enough to tire them. This part of the house should be of the cleanest and sweetest and one where you would not be ashamed to take your best friend, if you hapened to be busy there. It is there that all the food we eat is prepared. All dishes used in the preparation of meals should be perfectly clean, and to have the kitchen always presentable, it is necessary that there should be a place for everything and everything in its place.

The interior should be finished in such a way that it will look neat and clean and be easily cleaned. Very often rooms are allowed to go shabby because the owners fail to realize at what little expense they can be papered or painted, provided they are willing to do the work themselves. The work is not so difficult as many suppose. A little practice, with the help of a few definite rules, will enable any one to do this work in a thoroughly satisfactory manner. The kitchen should be conveniently large with at least two windows, as no one likes to work in a dull room.

There are many ways of finishing the walls. I prefer a chair boarding and floor

of hard wood. These can be oiled where soft wood would need paint. The walls, above the chair boarding, should be plastered and papered and the ceiling done the same as the walls.

The furniture of the kitchen need not be expensive to be convenient. It is the labor-saving devices that are needed. A sink is a very important and handy invention. On farms where fluids are used to a good advantage, they could be carried away to a barrel some distance from the house. Bore a hole in the bottom of the sink and put in a pipe about two inches in diameter. Carry this down, through and under the floor two feet or more and have it terminate about fifty feet from the house, in a barrel sunk in the ground. A V-shaped turn in the pipe under the sink will do much to prevent return of gas.

A good-sized work table is best covered with zinc or oil cloth; the latter looks nicer. Then if you have a small table on castors, the top just even with the top of the stove, and a shelf beneath, even with the oven when the door is open, and both of these covered with zinc, it can be moved close to the stove and hot dishes and pans put on it, thus saving many steps.

If you have little pantry room, place a large box with shelves in it under the work table. In it can be kept the heavier cooking utensils. Have a curtain on it to suit the color of your room. It will be very convenient and not look objectionable. Have a wide shelf above the table for extra dishes or for the clean dishes as they are dried to put away. Have this kept covered with paper.

A kitchen cupboard is a help in taking care of spices and small groceries. This has a flat top, two drawers and shelves below enclosed with doors. Another style has shelves above as well as below, enclosed with glass doors. A kitchen cabinet is a much more elaborate affair and consists of cupboard with shelves, cutting and kneading boards, spice boxes, flour bins, large drawers and a small cupboard beneath. It is very compact and a great convenience.

All the utensils should be kept as near as possible to where they will be needed. The tin covers of saucepans and kettles hung on a rack within reach of the range. The cooking forks and spoons have their niches just below. The little knife is not in the knife box amid carvers and mixing spoons, but where it can be got at once.

The matter of cook stoves is too vast to enter upon. A range is preferred where means will allow, but no stove is handsome and none that is kept clean and bright is ugly, so long as it bakes well. A few ordinary chairs will do, with an easier one for resting in. There are often a few minutes when one is obliged to wait for a dish to cook, no matter how industrious the worker, and at such times have a book or magazine handy to improve the moments.

DOMESTIC HELP; THEIR TREATMENT, TRAINING, DUTIES AND RIGHTS.

By Mrs. J. H. Wismer, Port Elgin.

The subject of "Domestic Help" seems to me to be a clear case of capital and labor, and it must be evident, even to the most careless observer, that in domestic circles these two enemies are as much at war as we find them in our factories and other places of employment. Yes, I believe more so, and the reasons seem plain.

Speaking generally, nothing more is expected from the average workingman than that he perform his labors well, and this alone satisfies his employer, but in most homes the work to be done is only one factor of the many qualifications required.

If I should try to dispose of this first division of our subject (treatment) in as few words as possible, I would repeat the Golden Text of Christ's Gospel: "Whatsoever ye would that men should do unto you, do ye even so to them." That would mean that the lady of the house would say: "I will treat the girl in the kitchen exactly as I would like to be treated if I were in her place; I will offer her no work that I con-

sider beneath myself, and while I must always look upon her as a subordinate, I shall never treat her as an inferior." With fair wages, and this rule fully carried out, where is the girl who would complain, or could be induced to do you an injustice?

A great deal could be said about the duties and rights of the domestic, but much would depend on the circumstances, and what would be suitable in one instance might not be proper in all cases. As a general rule, however, I should say that no objection should be raised against doing any part of the household work, as I am one of those who believe that all labor is honorable and dignified, but prudence and justice would suggest to the employer that no one person should be required to perform all the hard, tiresome work to the exclusion of that which is more pleasant.

Industry, habits of cleanliness, truthfulness, politeness, morality and a disposition of willingness to please are all virtues that should be insisted upon, and where these are possessed I see no reason why the servant should not be allowed to mingle with the family or be introduced to our acquaintances when they make us a friendly call. We can scarcely come to any other conclusion when we consider that in many cases the principal difference between the employer and employed is only a matter of wealth.

When there are good reasons why the domestic should wear a special costume or take her meals before or after the family or company, there would be no excuse for refusal, but a girl possessing the virtues mentioned, and being required to practise eating alone in the kitchen, or to wear a certain head-dress as a sign of servitude or badge of inferiority, would be foolishly sacrificing her self-respect by submitting.

Perfection on the part of the domestic should not be looked for. They are human, and they have their failings. Sometimes they will require to be sensibly spokn to for inattention to duties, and the employer who fails to speak at the proper time, neglects an important duty. It must not be forgotten though, that when they do well they like to be praised for it, and if you have plenty of scold and no praise you are in a fair way to be poorly served.

VENTILATION AND HEATING.

By Dr. Sinclair, Walkerton.

Before commencing a study of the first part of our subject, let us clearly understand its meaning. Ventilation is the process of changing the air in rooms and closed places, so that a certain standard of purity may be preserved notwithstanding the vitiation which the air undergoes from the breath of occupants, the products of combustion, of illuminating agents and other causes.

We shall first consider what pure air is, and what amount of contamination is required to produce a deleterious effect upon the health of individuals inhaling it. Pure air is a mixture composed of 78.98 parts nitrogen, 20.99 parts oxygen, and 0.02 parts carbon dioxide, in every 100 parts. The association of these gases in atmospheric air is not a chemical union, but merely a mechanical mixture, readily separated. Oxygen is the absolutely essential element for the support of human and all animal life. Nitrogen is the vehicle for carrying the oxygen, or for diluting it so as to make it fit for ordinary respiration. Carbon dioxide is far from being such an indifferent agent. It is essential to life in the vegetable kingdom, but not in the animal. To man it is a superfluous agent, doing no harm in minute quantities, but becoming very injurious as the quantities are increased. While oxygen, nitrogen and carbon dioxide are the three essential components of life-giving air, other gases, such as ozone (or peroxide of hydrogen) nitrous and nitric acids, and water in a gaseous form, are found to be more or less intermingled with them. Ozone, which is merely oxygen which has taken on a new set of properties in consequence of the action of electricity or some other force, is most valuable as a disinfectant.

Air becomes contaminated in various ways; by respiration, by combustion, by putrefaction, sewage emanations and excremental filth, by gases, vapors and suspended metallic, mineral and vegetable matters given off by trades and manufactories, and by poisons of unknown nature given off by damp and filthy soil.

To us the first-mentioned means of contamination is perhaps most important. Air, as expelled from the lungs, contains only 13, instead of approximately 21 parts of oxygen, the missing 8 parts having been withdrawn by the blood-cells in those organs. The 0.03 or 0.04 per cent. of carbon dioxide allowable, is increased to 4 or 5 per cent. An increase of watery vapor is perceptible, and this is loaded with organic matter, the most injurious ingredient of re-breathed air.

Quantities of this organic matter are given off with the perspiration, by the skin, as well as by the lungs. When it comes in contact with the moist warm air of a room it undergoes decomposition and forms a medium on which the various disease-producing bacteria feed and multiply, and thus the room is made a focus from which contagious diseases are spread and propagated. Organic matter is characterized by a fetid odor, easily recognized in over-crowded rooms, the occupants of which have not paid strict attention to personal cleanliness, and quite frequently, though in a less degree, in the neighborhood of our beds after they have been slept in, and also in sick rooms. The odor, when strong, creates in those unaccustomed to such impurity, a feeling of positive debility, the result of poisoning. Now substances which imbibe water freely will absorb this matter and retain it indefinitely, owing to its molecular form. Among the most common absorbents of your households are woollen goods of all kinds, feathers, carpets and moist paper, besides the woodwork and furniture. Take warning then, and banish all articles of such description which cannot be easily and frequently washed and cleansed. We find that straw and horse hair take up organic matter in a very slight degree; and just here is a suggestion for your beds. If you cannot afford a good hair mattress, an expensive luxury, avoid wool ones, and those of unknown composition, as well as the still more unhealthful feather bed, and resort to pure clean straw that you can afford to empty out and renew at will.

We have seen that air, as expelled from the lungs contains carbon dioxide to the amount of 4 or 5 per cent. instead of 0.03 or 0.04 per cent., as it is in pure air, or 0.06 per cent., the limit of what can be endured without injurious effects. We can readily see then the necessity for frequently changing and freshening the air of our habitations. It has been ascertained that whenever other impurities exist in the air carbon dioxide increases in the same proportion; and it is therefore usually taken as the standard of impurity, so that in order to have pure air to breathe we must get rid of the excess of carbon dioxide.

Carbon dioxide is produced in large quantities not only by the breathing of human beings and the lower animals, but by the perspiration, by the combustion of fuel and lights, and by decomposition of animal and vegetable refuse. It is estimated that 822,000,000 cubic feet of it are produced in the City of London, England, every day; or 9,500 cubic feet per second. Nevertheless through its powers of oxidation and the physical changes which it undergoes through the agency of storms, rain, currents, temperature, etc., the atmosphere preserves a marvellous uniformity of compositon. Then shall we not make some provision in our closed buildings for the operation of some of those agents?

We have still another gas which is important for us to consider as an impurity of the air, viz., carbon monoxide, a most deadly poison. It is always present where combustion is imperfect. Our coal stoves and furnaces become generators of this poison, if not carefully and skilfully managed. It can easily be distinguished when burning on top of the coal by its pale, blue flame. Its formation can be prevented by giving the fire sufficient draught, and seeing that it burns brightly. The draught is especially necessary when a fresh supply of coal has been thrown on. This gas is not only formed by the incomplete burning of coal, but by that of wood, or any other carbonaceous material. This gas often destroys human life when allowed to escape

into bedrooms, the occupants of which are asleep. It acts as a narcotic poison, keeping those exposed to it in a comatose condition until life is extinct. Its milder effects are languor and oppression, difficulty of breathing, slight dizziness, confusion of thought, headache, accompanied by a feeling as if a tight band encircled the forehead and temples, in a word the symptoms of narcotic poisoning.

Besides the impurities formed within the room itself we find many others, quite as injurious, drawn in from its neighborhood, where that is not in the condition it ought to be. The burning fires create a draught by which the air of surrounding soil is drawn within by suction. Then let us see to it that the soil about our dwellings is kept dry and clean, as well as the dwellings themselves. It is a well-demonstrated fact that the death rate from consumption, rheumatism and its concomitant heart disease, infantile diarrhoea, and a variety of other diseases, is materially lessened by the drying of the sub-soil. The popular idea that the air ends where the ground begins, is a widespread delusion. All soils are more or less porous, and contain air, which may give place to foul gases or to water. A house built on gravelly soil is upon a mixture of two parts small stones and one part atmospheric air. It is as needful to keep this air pure as it is that of our dwellings, in order that we may enjoy perfect health. Where dish water is thrown from the door upon the ground, soapsuds disposed of in the same manner on washing-day, and all sorts of decomposing particles are sent with them, forming one grand cess-pool, or a large area of wet soil, giving out its poisonous exhalations to pollute the air, we must expect to find general bad health, and the most virulent types of contagious diseases. In the days when we lived in the old-fashioned houses, with their ill-fitting doors and windows, and large open fireplaces, these poisons were so quickly sucked through the house, and were so diluted with fresh air, that they did little harm. But the modern house, with its double doors and double windows, and absence of ventilating flues, forms an excellent receptacle for storing them to the subsequent injury of the inmates. Look well, then, to the cleanliness of your own yard, and, in case you are living in a closely-settled part of a town or city, look to your neighbor as well. If he is not paying sufficient attention to the matter report him to the health officer.

The size of the rooms we occupy is a question of great importance. In the British Army, previous to 1836, the death rate from consumption was exceedingly high, and the Government was moved to appoint a commission to inquire into the cause of such mortality. The decision of the commission was that the limit of air space allowed each soldier was insufficient. Acting on this suggestion the Government ordered that every soldier in barracks should be allowed 600 cubic feet of air space, and that was ordered to be well ventilated. This change was followed by an immediate improvement in the health of the soldiers. It is now an established rule that each individual requires a minimum of 600 cubic feet of breathing space, while 1,000 cubic feet is required for perfect comfort and health. The air of this space should be replaced by pure external air, at least three times per hour, in order that the individual may have the 3,000 cubic feet per hour required to keep him perfectly healthy.

In our uneven climate we require a different system of ventilation in summer from what we do in winter, owing to the necessity for artificial heat in the cold weather. During the warm weather in summer there is a larger amount of organic matter given off by the skin than in cold, and this necessitates freer ventilation, but on the other hand, the outer air is nearer the temperature of the body, and can be more freely admitted. Open your doors and windows and drive out the foul air; while, at the same time replacing it with pure and fresh air from outside. This means of ventilation will be found insufficient for fully occupied rooms, such as school rooms, churches, public halls, etc., and the deficiency must be made up by artificial modes of ventilation.

The subject of ventilation, in a cold climate like ours, is inseparably connected with that of heating, for it is impossible to have efficient ventilation in cold weather without warming the air, so that its rapid movement may not produce the discomfort

of draughts. The degree of moisture contained in the air must also be considered in the same connection, a cool current of air being rendered more disagreeable by an excess of it, and a warm current becoming less conducive to comfort by either an excess or a deficiency of it. With most systems of heating at present in use, the great difficulty is to secure sufficient humidity in the atmosphere breathed. A pan or kettle of water set on top of the stove or furnace giving off its steam may make up this loss. A certain amount of moisture is an absolute necessity to health and comfort.

We shall now consider the two parts of our subject together, and try to gain some information as to the best mode of securing both heat and ventilation, adequate to our needs. In cold weather, our efforts are directed mainly to securing a sufficient supply of warm air to counteract the effect of the colder atmosphere out of doors, and we seldom think of making provision for the escape of foul air. Fortunately for us, provision is often made without thought or knowledge on our part, by imperfect carpentering, draughts in stoves, etc. We think mainly of economizing fuel, and at the same time securing enough heat to keep us comfortably warm, while to secure a constant access of pure, warmed air to our bodies, the consumption of a large amount of fuel is necessary.

We have three great natural agents to co-operate with us in the securing of proper ventilation, the law of diffusion of gases, the difference of weight between masses of air of unequal temperature, and the wind, which is the result of the second of these agents. All must be taken into account when our arrangements are being made. Now there are numerous systems of ventilation and heating; some good, some fair and some very bad. Since a part of the time allowed for one of your afternoon meetings is very inadequate to an exhaustive study of the subject before us, we shall consider only one—recognized to be, on the whole, the best of these systems.

By this system a ventilating flue made of tin, or some other smooth-surfaced material that will not tend to accumulate dust and dirt, is placed in the wall, its lower opening communicating with the out-door air, the fresh air entering here, and being carried to a furnace in the basement, about whose surface it is passed, for the purpose of warming, and then carried on its upward way through the flue, until it reaches a point in the wall above the breathing line of the occupants of the room. An opening is there made, and the flue connected with it, so that the warmed air may escape into the room. Now we know that heated air is lighter in weight than cold, and its natural tendency is to rise, consequently if we were to stop here, we would have the upper part of the room hot, while the lower air would remain cold, and might cause great discomfort, but, by placing an outlet for the foul air at the floor immediately beneath the point where the warmed air enters, we create a draught by which the cooler foul air of the lower part of the room is drawn off, and is replaced by warm air from above. By this means the heat is distributed fairly equally to all parts of the room, by diffusion and circulation. Thus we have, at the same time, a well-heated and a well-ventilated room.

Were we to extend our study of the question of heating, we should find that steam and water possess many advantages over hot air, but the question of ventilation becomes more complicated where either is used.

In a well-managed room the temperature should never rise above 70 degrees Fahrenheit, and never fall below 60 degrees, 67 degrees being found comfortable for most people sitting still. The humidity should be kept as near 70 per cent. as possible, and the size of the inlets and outlets should be so regulated as to allow of the air being completely changed not less than three times per hour, and the air conducted from without, through the ventilating shaft, should be perfectly pure. In order that this may be so, it is necessary to see that no decomposing matter of any kind is allowed to lodge in our neighborhood. It may not be out of place at this meeting to suggest that the same rules of health should be observed for the lower animals as for man.

DISCUSSION.

Q. If bacteria are around us all the time how is it that some people fall a prey to disease while others seem always strong and healthy ?

A. Miss Blanche Maddock, Guelph. Nature has so arranged that when the body is strong and healthy there is a force in the system at enmity with the bacteria, which protects it and prevents the entrance of disease germs. If the body is run down or weakened by any cause this force is not sufficiently strong to protect the system and disease is the result.

Q. Is it possible for a person to take consumption from a tubercular animal ?

A. Prof. Harrison (Agricultural College) says yes, and such cases have been known. Although much has been said to try and prove the contrary, it cannot be done, recent case having proved beyond a doubt the truth of the statement.

Q. If disease is due to bacteria, why is it that disease is more prevalent in the slums ?

A. The acknowledged fact that diseases is more prevalent in slum districts proves the presence and action of bacteria. 1st, Because one of the most favorable conditions for growth of the bacteria is uncleanliness or impurity of any kind. Of course these are abundantly supplied in slum districts. 2nd, Because of the overcrowding of such quarters. Pure air and sunlight, nature's health preservers, are shut out, consequently the system falls an easy prey to disease.

Q. If the foregoing is true, how is it that epidemics are so often traced to rural districts, where there is no over-crowding ? Why is it that often several members of the family in the country are taken with typhoid fever ?

A. Where an epidemic has been traced to a rural district it has been found in every case that the same sanitary conditions exist. I think perhaps there is no subject more discussed at our institute meetings than the lack of cleanliness in farm surroundings. Old buildings and outhouses are allowed to remain standing, many of them retaining the accumulation and rubbish of years. The farm water supply is allowed to become contaminated and impure. Too often there is neglect in thoroughly cleansing and scalding dairy utensils, consequently milk (one of the greatest disease conveyers known) becomes laden with disease germs. The typhoid fever germs thrive in such conditions. Thus through the milk, not only the family, but all consumers of the milk are affected.

Q. Is it possible to destroy germs by frost?

A. Not under ordinary conditions. When packed in ice for some time they may be destroyed.

Q. Would a room that has been closed up all winter (after sickness) and kept very cold be free from disease germs in the spring ?

A. No, cold will not destroy germs. It will keep them in check, but as soon as the room is opened in the spring and subjected to the usual warmth and moisture they would again multiply rapidly.

Q. What effect has sunlight on bacteria ?

A. Prof. Harrison says the effect of sunlight has been overestimated as a germ destroyer. If bacteria in solution were exposed to the direct rays of the sun it would in time destroy them, but the rays of the sun would not destroy them if exposed on a dry substance. The main benefit of sunlight is in keeping the individual strong and in a condition to resist disease germs.

Q. Could you introduce into already ripened cream, cream that was all ready for the churn, a certain kind of bacteria that would ensure the keeping qualities of the butter, the same as commercial preservatives?

A. No. The culture containing the germ that will give a butter of good keeping quality must be put in before the cream is ripened, in order to get the start of the other injurious germs that would destroy the keeping quality and prevent the uniform ripening of the cream.

Q. What is the cause of stringy sticky milk or cream ?

A. This trouble is due to a germ which gets into the milk, very often through feeding dry fodder at milking time. If it once gets into a stable or dairy it is very difficult to destroy it. Thorough disinfecting and scrupulous cleanliness are the only remedies.

Q. Are milk cans not more easily cleaned after whey has been returned in them than when the milk is allowed to dry on them?

A. The cans look cleaner with less trouble after whey has been in them, but they contain a great many more germs than when returned empty (and unwashed). The reason for this is that the whey tanks are laden with bacterial life. Nine patrons out of ten may be careful and cleanly, taking care to always send clean, pure milk to the factory, but the impure whey of the tenth patron being mixed with the rest contaminates it. Thus by returning whey in the cans germs causing trouble in the cheese are spread over a whole section.

Q. If cans are washed at the factory is it necessary to wash them again at the farm?

A. Yes, decidedly. The dust from the roadside that gets in the cans is sufficient to spoil a whole can of milk. If the cans have been washed at the factory they should be washed with hot water and a brush in order to remove any remaining grease, and then scalded with boiling water in order to kill the germs that are sure to be in the can until scalded in this way. If the cans have not been washed at the factory they ought first to be washed in luke-warm water in order to loosen the milk that will have dried on the sides and bottom. Then wash with hot water and scald the cans.

Q. What do you consider of first importance in the building of a house, from a sanitary standpoint?

FOOD IN ITS RELATION TO THE BODY.

By Miss Agnes Smith, Hamilton.

Before we can study the question of food, we must know something about the body to be fed. The body is made up of organs each having its own particular function. The various materials composing the organs are called tissues. We have bone tissue, muscular tissue, nerve tissue, and so on. The tissues are built up of cells and each kind of tissue is composed of cells of a similar kind. For example, if we examine a grain of wheat we find the starch cells are quite different from the bran cells. They are different in structure because they differ in function. So it is in all the higher forms of life, some cells have one function, some another. We might compare a yeast cell to a man living all alone, doing everything for himself, being his own tailor, carpenter, etc. A human body is like a nation in which some are farmers, some manufacturers, some merchants, and just as the merchant does not understand farming, nor the man who raises wheat know how to make it into flour, so a cell of one kind cannot do the work of another. As for example, in lung tissue the cells are adapted for absorbing oxygen and in the retina of the eye for receiving light.

The millions of different cells in our bodies have all to be fed, but they are not able to lay hold of food as it enters the body. It must be prepared for their use in a special way, in short, we say it must be assimilated. The digestive juices produce their effect upon it and it is absorbed and carried into the blood. The blood then carries it in the form of nourishment to the minutest parts of the body. It is not till our food becomes blood that the body is able to derive nutriment from it. If we thought oftener of the wonderful house in which we live, it would keep us from doing many things that we now thoughtlessly practise. Many of us are more careful of our sewing machines than we are of our bodies. The body has been called a machine; let us see in what this analogy consists. A machine requires fuel and water for action; so does the body; but there is one great difference; man is a self-building

and repairing machine, or at least he ought to be. Too often we have to shunt into a repair shop and lay up for a week or two. This is usually the result of carelessness or ignorance.

The body asks of the food fuel for action, also material to build it and keep it in repair. We find there are two great classes of foods corresponding to these two requirements—the body builders and the fuel foods.

During the period of growth the body builders form the tissue, and all through life they keep it in repair and in working order. Tissue builders may be divided into three parts, first, water; second, mineral waters, and third, nitrogenous foods. Water is necessary for health, and few of us really recognize its importance. Good water is a prime requisite. Modern science has shown us how disease may be transmitted by water. In towns and cities the sanitary conditions of water supply is carefully looked after by competent authorities but in the country it is an individual matter.

There are three conditions to be considered when thinking of the water supply: first, source of supply; second, position of well, and third, construction of well. If satisfactory answers can be given to these questions we may feel quite safe. If, however, we are doubtful about the purity of the water, there are some simple household tests that may be used. First, boil some of the water and if a disagreeable odor is given off it is not as pure as it should be. Second, evaporate some of the water in a small dish and if the residue is dark and viscid it contains organic matter and should not be used. Third, another test for the presence of organic matter in water is the bleaching of permangate of potash.

We found when considering the body that all digested food was carried by the blood to its different parts. The liquid part of the blood is 90 per cent. water, and so is a great factor in conveying nourishment. It also aids in carrying away the waste of the body into its proper channels. Water also keeps all the fluids of the body in the proper state of dilution. It actually enters into the chemical composition of the tissues. When we understand that 3-5 of the enire body is water, we see what an important part this fluid plays.

The second division of the body builders, as we have classed them, is the mineral water found in food. This is found in large proportions in the bone, teeth and hair. It may be laid down as a general principle that the tissue-building materials are derived from foods of animal and vegetable origin such as milk and fruits. The roots of plants go down into the earth laying hold of the mineral matter stored there, and working it into their own structure. This prepares them in a form ready for man's use.

The last class of body builders, the nitrogenous foods, is the most important. Nitrogenous foods contain albumen, which is the most complex of organic substances. Albumen is found in both the animal and vegetable world. Such vegetables as peas and beans contain a large percentage of this tissue-former, but that found in the animal kingdom is much more easily and thoroughly assimilated, that is, made into life. This is quite in accordance with the economy of nature. The ox and sheep in their abundant leisure, prepare grass and grain into a concentrated food for use. The other class of foods, the fuel foods, may be divided into, first, starches and sugar; and, second, fats. Starch and sugar are very similar and have the same chemical composition. It is possible by means of heat to convert starch into a kind of sugar as in the toasting of bread. Starch is a vegetable food; it is formed and stored by the growing plant as food for the young shoots of the next year, or to be used in time of adverse circumstances. In the body it is converted into fat to make heat or energy, or may be stored as a reserve supply of energy.

Fat, our other fuel food, is principally of animal origin, although some nuts and seeds are rich in fat. It is a much more concentrated food than starch. It is able to be stored as a reserve supply of energy much more easily than starch, to be called upon in the case of sickness or starvation. Starches and fats are the fuel of the body. Just as an engine produces heat from the fuel with which it is supplied, and part of

this heat is changed into energy, so these foods keep up the body heat and enable it to do the work required. To a certain extent the nitrogenous foods are able to replace the fuel foods for they can act as fuel, but these foods are always more expensive than the regular fuel foods and are needed for other purposes. It is, however, impossible for the fuel foods to build tissue; while a nitrogenous diet may sustain life, a person confined to fuel foods would soon waste away and die.

We have found what every class of foods does for us and that we need every class to carry on our life processes to the best advantage. But what does this mean for the every-day housekeeper? It means that she should familiarize herself with the composition of the common foods so as to be able to make suitable combinations. This knowledge of the composition of foods makes it quite clear to us that food is not necessarily nutritious in proportion to its cost. When it is necessary we can substitute cheap foods for more expensive ones and get the same food value.

PRINCIPLES OF COOKING.

Report of Miss Agnes Smith's Talk at Simcoe Fair, October 16th, 1902

We have two great classes of foods, viz., body-building foods and fuel foods. Our body-building foods are water, the albuminous foods and mineral substances. As an example of the mineral substances we have lime in milk. The fuel foods are starch, sugar or carbohydrates and the fats. In cooking we have to remember that the albuminous foods do not need much cooking; starches have to be well cooked; the fats do not need cooking as they are all ready for digestion, so that we only have the albuminous foods and the starches to consider. To-day we will take eggs as an example of albuminous foods. In the first place it is necessary to cook eggs at a low temperature in order to preserve the digestibility.

Meats. In meats there are three parts—the juice, the tubes that hold the juice in place, and the framework that keeps all these tubes in their places. The juice of the meat is the same substance as the white of the egg. It is hardened and toughened by heat, so that in cooking meats we have the same principles as in cooking eggs. In roasting meat something else comes into consideration. We want to form a coating on the outside to keep the nourishment inside. If we brown a piece of meat through and through we will not get any good from it. As an illustration we will cook an egg. Put the egg in boiling water and immediately take it off the fire, where we will leave it for ten minutes. This is cooking the albumen at a low temperature. If you like to put it in cold water and let it come to a boil it amounts to the same thing. Some may think it a very small matter to cook an egg, but if it is any better to do it properly, we may as well do it so, and get all possible good from it. To cook an egg hard, we put it in hot water and set it on the back of the stove for twenty minutes, which is sufficient to lower the temperature, and you can have a hard-cooked egg and still have it in better form than by boiling it for three minutes. In regard to meats, we should as far as possible cook them at a low temperature. To make soup we put the meat on in cold water to draw out the nourishing qualities. There is no sense in keeping meats or chickens lying in water, as this tends to draw out the nourishment.

An Omelet. Now we are going to make an omelet, which illustrates the same principles as broiling meat. First, we separate the parts of the egg and add one tablespoonful of milk to the beaten yoke; blend the yoke and the milk together. Sprinkle a little salt on the white of the egg, beat well, and mix with the yoke and milk. This we put in a hot pan and have extreme heat on one side while the other side is not exposed to the heat. We do not turn the omelet as the extreme heat on the one side is sufficient to cook the albumen which needs but very little cooking.

Starchy Foods. Starches require exactly the opposite treatment to the al-

buminous foods. They cannot be cooked too much. To illustrate this we will make an ordinary white sauce. Take equal quantities of butter and flour. Flour of course contains other substances besides starch, but it is a starchy food. Heat the butter and when warm, mix in the flour, and to this quantity add half a cup of milk. This must boil. It must reach a high temperature before it is fit for food. The reason for this is that each of the little starch grains has a coating round it, which is like thin white paper. It is impossible for the digestive juices to get through this coating until it is broken. It is not well to add salt to any milk mixture until it is cooked, as it is apt to curdle.

So far we have been cooking starch with moist heat. In making toast we are cooking starch which has already been cooked. When we toast bread we are just forming a crust over the bread, and in that way we are cooking the starch still further.

But how are we to manage when we have to cook albuminous foods and starchy foods together? To illustrate this we will make a lemon-filling and use one cup of water, three tablespoonfuls of corn starch and half a cup of sugar. Mix the sugar, corn starch and water, and as starch needs thorough cooking, let it boil. Remove from the fire and stir into this a beaten egg. The heat which is in the mixture will be sufficient to cook the egg. Last of all add the lemon juice.

THE FOOD VALUE OF MILK, BUTTER AND CHEESE.

By Miss Laura Rose, Guelph.

The stomach and the moral nature are in intimate sympathy with each other, and the great process of digestion or assimilation underlies the whole human structure. Upon it depends the mental and moral growth, therefore what we shall eat and how it shall be prepared is the essential care-thought.

Milk is the natural food and the first food of life. It is peculiarly adapted to the human stomach and contains all the elements necessary for the growth of the infant body. A healthy stomach will absorb milk as readily as a sponge absorbs water. Just before our food is changed into blood, in the last process of digestion, it closely resembles milk. Why then not take more milk and less bulky, fibrous food and so relieve the digestive system of some of its hard work? Children should especially be encouraged to take milk with their food, in place of tea or coffee, for instead of being harmful as in the case of the latter beverages, it furnishes nutriment as well as drink. A glass of hot milk with just a dash of red pepper and a little salt in it acts as a wonderful stimulant and if taken when one has a weary over-taxed feeling many a bad cold or sickness could be averted.

But milk to be wholesome must be fresh and pure. Cleanliness in every detail is necessary yet there is such scope for slackness and so much slackness practised, that it accounts to a great extent for the small quantity of milk used. We hear people say, "I cannot bear milk, it has such a cowy taste and smell." Real clean milk from properly fed cows has really very little taste or smell, and when there is anything unpleasant about it, it is well to investigate matters.

The supplying of milk to cities has become a great and serious question. The establishment of laboratories where perfectly pure and pasteurized milk is furnished for the use of infants and invalids has helped in saving many lives. Thirty per cent. of all deaths occur during the first year of existence and sixty per cent. of the children fed on cow's milk die before their fifth year. Very often chemicals are put into milk to keep it sweet longer, but it is a dangerous practice and cannot be too strongly condemned. For this purpose common baking soda is sometimes used and frequently formaline and boric acid. The latter gives rise to serious bowel trouble; seven grains to a pint of milk causes diarrhoea. Milk is often diluted with impure water, and in this way disease germs find access into the human system. If

there is any doubt about the purity of the milk or if it is apt to sour before being used, the easiest, safest plan is to heat it to a temperature of about 160 degrees—hold it at that for twenty minutes, then quickly cool.

Cream and Skim Milk. Cream is generally considered the most important part of milk, while little value is laid on skim milk. What is cream? Its principal constituent is fat, a valuable heat producer, and one which will store up fat in the body, but cream is deficient in the nutrients essential for vital purposes and the general up-building and repair of the body. Skim milk is rich in these compounds, and strange as it may seem, will sustain life better than cream. A healthy child would starve if fed only on cream. I would not for the world say one disparaging word regarding cream. Who does not like good cream? What a fitting accompaniment it makes to well-made porridge, apple pie pudding, fruit, in fact, a little cream improves almost everything. It is one of the pleasantest and best ways of taking fat, and would we all could get more of it.

More skim milk should be used not only as a drink, but also in the preparation of foods in soups, bread, pies, etc. Prof. F. G. Short writes in "Hoard's Dairyman," as follows: "If the Government, instead of sending missionaries to Europe to teach the value of corn for human food would spend an equal amount of money in teaching how to use the despised skim milk and the value of it as food for humanity instead of hogs, there would be more profit to the dairymen and consumer as well. But corn is golden and appeals to the imagination while skim milk is thin and cannot be handled on the board of trade. There is money in it all the same."

Exactly why skim milk should be regarded with so little appreciation is difficult to say, except perhaps because it is liquid. If we had the same amount of nutriments and water held in a solid form by cellulose there is no doubt it would bring a good price in the market, but the average consumer does not distinguish between solid and liquid water, and consequently milk is passed by for something not more nutritious, but more solid. Two quarts and a half of skim milk have about as much food value as a pound of steak and more value than a quart of oysters. A recent report of the British Farmers' Association shows that skim milk is a valuable addition in bread making and materially increases the yield, and consequently the profits, besides adding to its nutritive value.

It is a mistake to make milk an entire diet for children after a certain age. Prof. Davenport of the Experimental Station, Illinois, experimented in this regard with some calves. Those fed entirely on whole milk sickened and died. Others, when partially paralyzed, recovered when fed solid food.

Butter. People seldom realize the important part fat plays in the economy of the body. They take it because they are fond of it, or leave it alone if they dislike it. We have little idea just how much fat we do eat, it is so often concealed in eggs, in milk, in cakes, in pastry and in cereals, like oatmeal, corn, etc. All fats contain three principal fats: olein, palmatin and stearin. Their chief difference is they melt at different temperatures. The less olein the harder the fat. Usually each fat has some distinct flavor and smell due to volatile oils. Butyrin is the characteristic fat in butter, and when it changes through age, or other unfavorable conditions, to butyric acid, it causes that rancid taste and smell in butter. Practically fats are very much alike and all serve the same purpose in the body. Some, owing to having more olein in them and so breaking up more readily, are more quickly absorbed into the system. Butter is especially valuable in this respect, and its pleasing flavor induces us to eat freely of it. Good bread spread liberally with good butter makes a complete diet, and one of which, with a few extras, we never tire. Were I a consumptive, instead of taking the disagreeable cod liver oil I would take plenty of lightly-salted, fresh butter and trust to it doing me more good than the patent medicines.

Cheese. Chemists tell us that cheese is one of the cheapest of foods, as its nutritive value is much greater than that of meat and its cost less. It is not only valuable on account of the proteids, fats and carboyhydrates it contains, but because of its flavor

and aroma. Physiologists say we could not exist on foods devoid of flavor, still at the same time flavors are not counted as food stuffs, but they unquestionably play a most important part in our diet.

In our country, cheese is considered a luxury rather than a staple food, yet one pound of cheese is equal in food value to more than two pounds of meat, and it is much more evenly balanced in fats and proteids. The poor man should look upon cheese as a blessing and use it far more freely. Throughout Europe generally the economic value of cheese appears to be pretty fully understood and appreciated. In Switzerland it ranks second only to bread, skim milk, cheese and bread forming the chief diet of the peasants. So it is the case in Germany, and my own observation when in England showed me what quantities of cheese were consumed there. In our country the idea seems to have become fixed that cheese is hard to digest. Personally speaking, I find I can often eat bread and cheese when afraid to eat anything else. Dr. Ruhner, a German scientist, experimented with himself. He found he could not consume much cheese when taken alone, but with milk he could take nearly half a pound a day, and it was only when he ate more than a pound a day, that it was less completely digested than meat. Prof. Konig says that in moderate amounts cheese is just as digestible as meat and eggs. It certainly is a cheap, easy and convenient way of getting part of the required six or seven ounces of proteid necessary for the body each day. The harm resulting from eating cheese lies in the fact that it is taken when too green. It is not until cheese has passsd through a ripening process that it has any economic importance. Fresh or partially cured cheese is very bad for anyone. The undigestible casein or curdy matter in the cheese, through the action of certain forms of bacteria, breaks down and becomes quite digestible.

There are many different kinds of cheese on the market. All have some special characteristic and all have their devotees. The fancy makes are expensive, and from the point of food value not any more nutritious than a good Cheddar, the kind commonly made throughout Canada.

DISCUSSION.

Q. How much salt do you use for a pound of butter?

A. Miss Laura Rose, Guelph. The salt in butter is largely a matter of personal taste. If one is making really good butter it is too bad to hide its fine aroma and flavor by heavy salting. When salting in the worker I use three-quarters of an ounce per pound and salt in churn one ounce per pound, as more salt passes off as brine.

Q. What is the cause of butter being bitter at this time of year (winter)?

A. There are two reasons; the cream may be held too long at too low a temperature. The air contains wild yeast germs. These find their way into the cream and, contrary to most germ life, thrive at a low temperature. We know that the characteristic feature of yeast is to produce bitter flavors. Their presence in the cream give rise to the bitter taste in the butter. Very often in the winter many of the cows are stripping. Sometimes the milk from such has a bitter, salty taste and makes a correspondingly bad-flavored butter.

Q. What would you do in such a case?

A. In the first place I would hold the cream at a higher temperature and churn oftener. In the second place I would not use any milk that did not taste nice. By occasionally introducing a fresh milked cow into the herd the cream churns better and the flavor of the butter is improved.

Q. Do you use butter coloring?

A. Yes, when necessary. Good butter color does not affect the flavor or keeping qualities of the butter, nor is it detrimental to health. Do not use too much: always err on the pale side. Usually one teaspoonful to four gallons of cream is sufficient.

Q. How often do you wash your butter?

A. When butter comes in nice granular form and has a good flavor I wash but

once. If there has been any taint on the cream, if the butter is very soft or if I am going to pack the butter, then I give it two washings.

Q. At what temperature do you have the wash water ?

A. In winter time it ranges from 48 degrees to 54 degrees, according to the temperature of the room and the firmness of the butter.

Q. How can you tell good butter paper ?

A. It should be of good weight; should be tougher when wet than when dry, and should have rather a sweetish taste.

Q. Do you put it on the butter wet or dry ?

A. I always wet it in clear, cold water. It folds more neatly on the butter and does not stick to the butter when removed.

Q. Is very hard butter considered good butter ?

A. No, butter should spread readily on bread. The feed, breed and condition of the cows affect the firmness of the butter. Cows receiving no succulent food or a long time milking, or if pure-bred Jerseys, will make firm butter—frequently so firm as to be objectionable.

Q. Did you ever know of cream being bewitched, and what is the cause ?

A. I have heard that in years gone by people thought a witch had gotten into the churn when butter would not come, and to drive her out they put in a red hot horseshoe, with the result that she vanished and butter soon came. Investigation now proves that in such cases the temperature was too low, and the horseshoe method is not now approved of.

Q. How do country women make cheese ?

A. It is very hard to tell how cheese is made. Come to the dairy school, and I will gladly show you how real, nice, small cheese can be made, with just such utensils as may be found in every kitchen.

Q. Do you consider toast indigestible, and how do you make it ?

A. I have known a few people who could not eat toast at all, but generally speaking, well-made toast is considered more digestible than bread. In the browning process the starch has been partially converted into sugar, thus simplifying the digesting of it. Fresh bread, quickly toasted, is bad for any one, especially when spread with melted butter. It makes a mass difficult for the digestive juices to penetrate. Hygienic or "double" toast is supposed to be the best. The bread is first put in the oven and dried and then toasted.

MILK AS FOOD.

By Miss Jean Rowand, Walkerton.

The chief bulk of milk is, of course, made up of water, the amount of which may vary even in ordinary, unadulterated milk from 90 per cent. in a very poor product to 84 per cent. in an unusually rich milk. The corresponding solid matter or "total solids" varies from 10 per cent. to 16 per cent. This solid matter or "total nutrients" is made up of protein, fats, carboyhydrates and mineral matter. The composition of ordinary milk is about as follows :—Water, 86 to 88 per cent.; fat, 3 per cent. and upwards; Solids, not fat, 8.5 to 9.5 per cent.

A quart of milk contains about the same amount of nutriment as three-quarters of a pound of beef, namely, four ounces. Six ounces of bread would likewise supply not far from four ounces of nutritive substances. To put it in another way, about one-eighth of the whole weight of the milk, one-third of the beef and two-thirds of the bread consist of actually nutritive ingredients. The seven-eighths of the milk and one-third of the bread are water, while the two-thirds of the meat, which is not actual nutriment, is mainly water, but consists in part of bone.

But while the quart, or two pounds of milk, the twelve ounces of beef and the six ounces of bread all supply like amounts of nutriments, the nutritive values are not exactly the same ; in other words, they would not be equally useful for food. Either

the milk or bread eaten alone would make a better balanced food for man than the meat, because it contains the different kinds of nutritive ingredients in proportions more nearly adapted to supply the wants of the body than is the case with the nutriments of the meat.

Milk contains all the ingredients needed for nourishment; that is, it furnishes the materials which build up the body and keep it in repair, and also those which supply it with fuel to keep it warm and to furnish the animal machine with the power needed to do its work. When milk is used for food, the casein and allied compounds serve the body for building and repair, and are also used for fuel. The fat and sugar are the chief fuel ingredients The mineral compounds aid in forming tissue, and have other uses as well, but they are needed only in small quantities.

The value of milk for nourishment is not as well understood as it should be. Many people think of it as a beverage, rather than a food. Milk is particularly adapted for use as a food by man for several reasons. It contains all of the four classes of nutrients, viz., protein, fats, carboyhydrates and mineral matter in more nearly the proper proportions to serve as a complete food than any other food material, although no one substance can furnish a complete food for an adult. It is in a form well adapted for varied uses either alone or more especially in combination with other food substances and in the preparation of various dishes for the table..

"We live not upon what we eat, but upon what we digest." Milk ranks among the most digestible of the animal foods in respect to all its ingredients. The fat of milk is an extremely fine emulsion, and is thus, in a sense, "predigested," or in a partly digested form before it is taken into the stomach. This may help to explain why it is so easily digested. When milk is taken into the stomach it is speedily curdled by the action of the pepsin and acid of the gastric juice. When milk is eaten alone, or in large quantities, the casein gathers in large lumps, which may be difficult of digestion by some. This is particularly the case with infants and with adults whose digestion is weak, and is one of the reasons why milk should be used with other foods and not taken in large quantities alone.

Human milk differs from cow's milk in the way in which it curdles when taken into the stomach. The casein of the former is not precipitated in such large lumps and is thus more easily digested and does not cause irritation. There is one per cent. casein in human milk and three per cent. in cow's milk. If for any reason a baby is deprived of its natural food—its mother's milk—it is given cow's milk. I had my attention called to this by hearing Mrs. Rorer of the Philadelphia Cooking School address the Experimental Union at Guelph, and she said the milk of the cow being intended for the calf, necessarily is not fitted for the human being; the former reaches maturity at about three years of age, the human being at seventeen to twenty-one. Examine the milk of the cow and you will find all the necessary elements for the growth of the calf. Examine the milk of the mother and you will find the necessary elements for the slower development of the infant. Prof. Mills asked how to modify cow's of milk to 100 degrees Fahrenheit, add two dissolved junket tablets, allow the milk to of milk to 00 degrees Fahrenheit, add two dissolved junket tablets, allow the milk to stand until thoroughly congealed, then stir it with an egg-beater; drain and throw away the curd, or use it for something else, saving the whey. To this add one pint of water, six teaspoonfuls of sugar of milk, eight tablespoonfuls or five ounces of cream and the whites of four eggs, mix together, whey, water, cream and sugar of milk. Take a small quantity of the mixture and put it in a fruit jar, add the whites of the eggs to it, screw on the top of the jar, and shake the mixture until the whole is thoroughly blended. Then return it to the mass and put it at once in a cool place. This will be given an ordinary milk. (A child cannot digest starchy materials until after the first teeth appear.) These materials are all in our homes with the exception of the junket tablets and sugar of milk. The junket tablets are just prepared rennet, and the sugar of milk forms the basis of most of the powders and pills that the doctors give us, and both can be had at the drug store.

Even after average milk is skimmed it still contains nearly ten per cent. of solids or nutritive ingredients. The value of skim milk as food is not generally appreciated. Taken by itself it is rather "thin" and has not staying power. One would have to drink such a large quantity to get the needed nourishment, and it is so readily disposed of that it does not satisfy the sense of hunger. But when taken with bread or used in cooking, it forms a very nutritious addition to food.

A pound of lean beef (round steak) contains about 0.18 pounds of protein. 2 1-2 quarts or five pounds of skim milk will furnish nearly the same amount of protein and have about the same fuel value as the pound of round steak. Two quarts of skim milk have a greater nutritive value than a quart of oysters. The nutriment in the form of oysters would cost from thirty to fifty cents, while the two quarts of skim milk would have a market value of from four to six cents. An oyster stew made of one part oysters and two parts skim milk would owe its nutriment more to the milk than to the oysters. I could eat a lunch of bread, ten oysters and one pint of skim milk; cost four cents. You could eat a lunch of: Soup, 8 ounces; beef, 2 ounces; potatoes, 2 ounces; turnips, 2 ounces; bread, 4 ounces; butter, 1-2 ounce; coffee, with milk, 1-2 ounce; sugar, 1-2 ounce, and the cost would be from fifteen to twenty cents, and yet I would have just as much nourishment as you would. It is a pity that our appetites would not let us live on bread and milk. What a lot of work it would save!

The ingredient of our food which costs the most and most apt to be lacking in ordinary dietaries, is protein. Skim milk has nearly all the protein of the whole milk. It has all the value of the whole milk for building and repair of tissue, for the making of blood, muscle and bone, and half the value of whole milk for supplying muscular power. When these facts are fully understood skim milk will doubtless be more wisely utilized. The ways in which a skilful cook can utilize skim milk in cooking are almost endless, and the protein thus added to the daily ration is of the utmost importance.

Besides skim milk, there is another important by-product resulting from the manufacture of butter, namely, buttermilk. Buttermilk as a beverage furnishes more nutriment than almost any other beverage except whole milk and skim milk, unless it be cocoa and chocolate. To many persons buttermilk is much more palatable than whole milk or skim milk. An ordinary glass of buttermilk would contain as much nourishment as half a pint of oysters, or two ounces of bread, or a good-sized potato. Buttermilk is much appreciated by many invalids and acts as a laxative.

As Josh Billings says, "I have seen many things on milk, but the best thing I ever saw on milk was cream."

BUTTER MAKING IN THE HOME.

By Mrs. Acheson Laird, Gorrie.

In the first place we must have good milk and that only comes from good healthy cows, fed on good sweet pasture, grain, etc., with pure water to drink and pure air to breathe. Impure water, especially has its effect both on the health of the animals and on the quality of the milk. The stable should be kept perfectly clean and the cows well bedded. The milk should be strained immediately after milking and on no account should it be allowed to stand in the stable. A good strainer is necessary, a cloth one being the best. Have your pails made of tin and with as few seams as possible, where the dirt lodges in and is hard to remove. Always clean every article thoroughly which is used for milk and in butter making.

In creaming the milk it is best to use the cream separator as a less amount of cream is lost than by other methods. The cost of hand separators is from $65 to $125 each, according to size. They will skim from 160 to 400 pounds an hour. These separators, with proper care, will last for years.

A dairy thermometer is indispensable in butter making, as no person can guess at temperature correctly at all times, and it is best to get a good one.

Each skimming when put in the cream can should be well mixed with what has been in before. No fresh cream should be put in the can from twelve to sixteen hours before churning or the butter will not all churn out.

The best churns to use are those with no inside fixtures. The churn should never be more than half full of cream to churn properly. The cream then has a better chance to fall. Before the cream is put in the churn, the churn should be thoroughly scalded with hot water and then rinsed with cold water. The churning should be done at as low a temperature as possible, so as to have the butter to come in a reasonable length of time. The colder the cream is churned the less butter will be left in the buttermilk and the butter will be better. We think it better to color the butter The general demand is for colored butter. One can soon learn by experience how much coloring matter to use. Fine dairy salt should always be used.

DISCUSSION.

Q. Is it best to work butter once or twice?

A. Miss Blanche Maddock, Guelph. If the butter is going to be used at once one working is generally sufficient, but if it is to be packed two workings are better. If the butter comes soft it is well to work it slightly, then leave it to stand in a cool place to firm up, and work a second time.

Q. Does it injure the butter to use coloring? Would you advise it?

A. If the market demands coloring use it. There is nothing injurious in the prepared butter color.

Q. How long should you churn?

A. It is well to regulate and ripen the cream so as to bring the butter in about half an hour.

Q. At what temperature would it be necessary to churn in order to bring the butter in that time?

A. Any hard and fast rules for temperature cannot be given, as the temperature for churning depends on the season of the year, the richness and ripeness of the cream and the churn, and also on the individuality of the animal. We should aim to have the cream test from 25 per cent. to 30 per cent. butter fat; should be sure that the churn is not more than half full, and that the cream is sufficiently ripened. It should have a pleasant acid taste and smell, when these points are observed. We should churn at as low a temperature as possible, so that the butter will come in nice, granular form in about half an hour.

Q. What is the cause of cream frothing in the churn?

A. There are two reasons for this. 1st, The cream was too thin; contained too much skim milk; and, 2nd, The temperature was too low for churning such thin cream. The richer the cream (usually) the lower the temperature required for churning.

Q. What would you do if the cream was in that condition?

A. Take some of it out and raise the temperature.

Q. If the cream is too warm just before churning, would it hurt to put in a little cold water?

A. Yes, it makes the cream thin and fills up the churn to no purpose. If the cream is too warm the better plan to lower the temperature is to place the can in cold water. This will cool the cream rapidly to the required temperature. If the cream is too cold place the can in warm water. Never pour hot or cold water into the cream to regulate the temperature.

Q. Can you give me any cause for having heavy butter? After churning a longer time than usual, when the butter did come it fell to the bottom of the churn?

A. Mrs. A Kinney, Grandview. I think I can give you one cause, as a similar case came under my notice a few years ago. Mr. Kinney was called to the home of a relative to help them out of just such a difficulty. Mr. Kinney treated the cream

to a much higher temperature than would be at all advisable with good cream, and after churning two or three hours succeeded in getting butter, but of a very inferior quality, and which fell to the bottom of the churn.

Q. Mine was not an inferior quality, and our next churning was all right. There had been no change in the herd.

A. One cause is conditions surrounding the dairy herd, care, feed and health of the cows. Mr. Kinney decided, after visiting the stables, that conditions were such as to cause the trouble at that time, with that herd. It was the year when feed and bedding was so very scarce and high priced, consequently many farmers used sawdust and leaves for bedding for their stock. As soon as this trouble was removed the conditions were improved. A good cow will usually do her duty if comfortably housed in well-ventilated stables. She must be given good, sweet bedding, properly balanced rations, with change of diet occasionally, and free access to salt, also plenty of good pure water, but not ice water.

Q. Will it pay to have a separator when having ice the year round to use for creamers ?

A. Yes, it has been proved there is a gain of one pound per week to each cow in the herd by using a separator as against creamers used under the most favorable circumstances.

Q. Is the lever butter worker much easier worked and as easily handled by a woman as the old butter bowl?

A. Yes, very much easier work and quite simple to handle. If there are any boys around it is much more interesting for them to use than the old butter bowl.

Q. Are they hard to make ?

A. Not at all. Any one who is handy with carpenter's tools can make one.

Q. Is it necessary to roll the salt for butter ?

A. Not at all when using a fine dairy salt.

Q. Is there any particular brand better than another ?

A. One excellent dairy salt is that made at Windsor. Most dairy salt is good. Never use coarse salt for butter.

Q. How long a time is best to allow salt to stand on butter before working ?

A. One hour. When salting the butter, after having given it two good washings in clear water, be sure to scatter the salt evenly and quickly over the butter in the granular form, lifting it carefully with the ladle so as to distribute the salt evenly, without compressing it in the least. Allow it to stand in a room where temperature is about 65 degrees to 70 degrees.

Q. How many times is it necessary to work butter ?

A. One thorough working is all that is necessary, being careful to have your butter in a solid mass, even in texture and color. Have the surface smooth before printing.

Q. Is it best to print it at once ?

A. Yes, while it is nice and pliable. Be careful not to allow it to get overheated or cold and hard, making it impossible to mould a smooth print.

Q. Do you not think plain, white butter paper preferable to cloths ?

A. For shipping or selling at wholesale to dealers it is preferable, but for private customers the cloths are in favor.

Q. We have been told that using a separator injures the grain of the butter. Is it so ?

A. No, it does not to any extent, and it must be admitted that it is away in advance in the way of cleanliness, time and profit, to any oher method of creaming milk to-day.

Q. Is it not difficult to ripen cream when it is all kept perfectly sweet ?

A. Not at all. You can make a uniform article (providing the feed of the cows has been looked after) by ripening the cream quickly. The day before churning heat it to a temperature of 70 degrees Fahrenheit, holding it at that temperature through

the day and early part of the night. It usually cools down towards morning, to our churning temperature, in winter, of 65 or 66 degrees Fahrenheit. Separator cream can be churned at a much lower temperature.

Q. Do you advise the use of a starter?

A. Not unless you are sure you are using a pure one. When using a starter do not take your cream up to so high a temperature. When ripening the cream keep it covered, but not nearly air tight. Also stir often while ripening, and keep it away from any fumes which might taint its flavor.

Q. What temperature is it advisable to churn at in summer?

A. At about 56 to 58 degrees Fahrenheit. The lower the temperature you can possibly churn at gives a better grained butter and more exhaustive churning.

Q. What is the right temperature for churning?

A. Miss Alice Hollingworth, Beatrice. This can only be learned by experience in your own dairy. 60 degrees Fahrenheit is a normal temperature, but it is often necessary to go above or below this to obtain the best results. Much depends on the breed and feed of the cows, the season of the year and the richness and ripeness of the cream. Always bear in mind that the lower the temperature at which you can obtain butter with half an hour's churning the greater will be the gain both in quantity and quality. Keep experimenting along this line. Two years ago I made the statement that I always churned at 67 degrees Fahrenheit in winter, and that statement is still confronting me in the Institute report, though I have since learned to handle the cream in a way that gives better results at 63 degrees Fahrenheit.

Q. What quality of salt do you use?

A. Only the finest quality of dairy salt. Some women, thinking to save a few cents, roll or crush the barrel salt for butter. This makes a finer crystal, but does not remove the other mineral elements which are in the coarse salt and which spoil the butter.

CARE OF MILK.

By Mrs. W. W. Wilkinson, Cheltenham.

This is a very important subject as far as the farmer is concerned, when farmers must, in order to gain a livelihood, turn their attention to something else than the growing of crops year after year. The time was in Ontario when there was money in grain crops. The soil was fertile, the prices of grain high, so that farmers could earn a livelihood by that style of farming, but we must now look to some other source than grain-growing for a living. Stock-raising and dairying seem to be the two most profitable industries for the farmer at the present time. The soil and climate of Ontario seem to be especially adapted for dairying, and our Government is doing its duty towards advancing this industry. With cold-storage facilities and the education of the farmers along these lines by Farmers' Institute meetings and Agricultural Colleges, there is no reason why we should not become the greatest country in the world.

The greatest drawback is the want of proper cleanliness in the handling of milk from the time it is milked until it is marketed, and while the men have an important part to perform in seeing that the cows are provided with proper stabling and that they are kept perfectly clean, still there is an important part for the women to do as well. First, I think it is our duty to see that the men keep everything clean and right and that we fulfil our part by seeing that the milking utensils are kept clean also. In this respect it would be well for us to follow the example of the Hollanders, who are noted for their cleanliness in dairying, and who have taken the first place against all competitors in this industry. Now I will try to give you, as shortly as possible, rules in taking care of milk, which we should follow closely if we ever hope to take the place we should as a dairying country. How is it that some dairy farmers are prosperous and have established the fact that the dairy industry can be made to yield

large profits, while others fail to find the profitable side of this industry ? The cause of failure is not on account of the low price of the manufactured article, but mostly on account of the handling of the milk from the time it leaves the cows until it is sold either as milk, cream, butter or cheese. The most of our dairy farmers neglect the chief principles which should be observed in producing pure milk. The care of milk seems a simple matter, but better methods in our dairying in Canada must be followed, if we are going to make a success of it. In looking over the butter market in the "Sun" a few weeks ago, it reported that there was a lot of poor stuff on the market. One lot came from Wellington County and the man was willing to take 12 cents for it, but could not find a buyer even at that price, so we may be sure that making butter did not pay that farmer.

Impurities and changes in milk, which were supposed to be due to ill-health of the cows, to foods eaten, or to thunderstorms, etc., science now teaches us are caused by very small vegetable organisms called germs or bacteria. Different forms of these little creatures produce different effects, many of which produce disease. In a single drop of badly infected milk the bacteria may be counted by the million. Dirt in milk is a sure sign of large numbers of bacteria, and so to prevent this we should adopt more cleanly methods in handling the milk. Science teaches us that impure milk is caused by bacteria. Let us see how they get into the milk and how they may be kept out of it. This is an unpleasant subject when looked at from its worst side, but a little care on the part of the farmers would overcome the difficulty. The causes of impure milk might be discussed under three heads, viz.: 1st, Diseased animals and persons and unnatural conditions. 2nd, Uncleanliness in the stable. 3rd, Uncleanliness outside the stable.

Contamination of milk by the germs of disease is the most dangerous form. Some infectious diseases attack animal and man alike, and if a cow is suffering with one of these she is a menace not only to the whole herd but to persons who consume her products, for the milk may readily act as a carrier of germs to the consumer. It has been found that in certain diseases, especially when the udder is affected, the germs may be in the milk at the time it is drawn. In that case no amount of protection after milking will ensure freedom from disease-producing bacteria. Different authorities hold that tuberculosis or consumption, diphtheria and other diseases may be transmitted from the cow to the consumer. Other factors than bacteria may influence the appearance and composition of milk at the time it is drawn and render it unnatural and impure. The cow's health is an important factor, but abnormal milk is also due to excitement of the cows. Never allow the dog to chase the cows home from the field or abuse them at milking or any other time, as this will seriously affect the quantity and quality of the milk. The cow is an animal of regular habits and even the change of milkers or changing the cows from one stable to another will affect the composition of the milk and make it of poorer quality.

Many changes in the quantity and quality of the milk may be charged to neglect. A farmer who leaves his cows out in a bleak storm should not be surprised that his test at the factory has fallen, while that of his neighbor's, whose cows were sheltered, did not fall. One of the first functions of food is to maintain the bodily heat, and when necessary it will be used for making heat instead of forming milk, thus the state of weather, temperature and storms affect them to a greater or less degree. Dairymen are all aware that bad treatment or neglect quickly result in decreased profits. The brutal treatment of a cow by an attendant by kicking, beating or otherwise is not without its affect on the milk. Bloody milk is often caused in this way

The second cause of impure milk is uncleanliness in the stable. The largest part of the impurities found in the milk get into it in the short time after it is drawn from the cow, and before it leaves the stable. This brief period may be called the critical time in the history of dairy products. In many stables myriads of bacteria are entering the milk every minute it remains exposed, being carried there by many kinds of foreign matter, some of which would do no harm were it not for the germs

they bring. Grotenfelt mentions the following impurities which he found in unstrained fresh milk, viz., manure particles, fodder particles, moulds, fungi, cow hairs, particles of skin, human hairs, parts of insects, flies, down from birds, small bits of wood, woollen threads, fine threads, soiled particles, dust, etc. It is evident that these different kinds of foreign matter are derived from numerous sources, but the bulk of impurities consist of ordinary stable dirt, chiefly manure, and its presence in milk is evidence of slovenly methods. Over fifty grains of this matter have been found in 100 pounds of milk, and when it is remembered that it contains myriads of bacteria of the forms causing decomposition, it does not seem strange that milk is soon affected by its presence. Germs introduced in this way in large numbers may act as poisons to delicate consumers, and cause severe intestinal troubles.

Dirt gets into the milk when in the stable principally from three sources. The cows, the milkers and the air, but this classification is unnecessary for stables which are carelessly cleaned. In such places there is a constant shower of bacteria. The cows supply most of the dirt to the milk, as any one will admit, if they are at all familiar with the conditions in many stables. It is not uncommon to see the cows covered with so much dust that the color of their backs cannot be seen. Their flanks, hips and sides are sometimes plastered with layers of manure. When the cows are dirty it is impossible to keep milk even decently clean when milking. Large lumps of dirt, hairs and chaff are continually falling into the pail.

Untidy attendants constitute another source from which milk is made impure, they frequently turn from cleaning horses or other dirty work to milking the cows; with no thought of their unfitness to handle milk. On some farms milking is regarded as the dirtiest of all work and milkers prepare for it accordingly. Dust adheres to the milker's clothes and it easily falls into the pail. His hands and finger nails also contribute a share to the impurities. Thus he may be the means of conveying to the milk as many kinds of germs as fall from the cows, and in addition to these he may transmit human disease to delicate consumers.

Air is also a source of germs found in the milk, as it carries more or less small particles of dust and these have many bacteria in and upon them. As dust is continually tending to settle, the largest number of bacteria is to be found near the floor and a vast number may fall into a milk pail or can in a very short time. Most of the dirt in the air is caused by dry, dirty fodder and bedding.

The next cause of impure milk is uncleanliness outside the stable. What has been said about improperly kept stables applies equally to an unclean dairy room. Milk will not remain pure if kept in an unclean place. Never allow the dairy room to be kept damp or sloppy, as this will produce bacteria. Where unclean dairy utensils and impure water are used the milk cannot be kept pure or sweet. Utensils are sometimes made of poor material or so dented that milk is not completely removed from them and furnish legions of bacteria to the next lot of milk which is put into them. It is almost impossible to keep wooden pails clean, the pores of the wood are so open. The supposed economy of using old delapidated vessels of any kind, those have double bottoms, patches and dents, frequently result in impure milk.

Neglected strainers and wiping cloths used for drying are also sources of impurities in the milk. Cleaning utensils is an operation sadly neglected on many dairy farms. Milk pails washed in cold or luke warm water soon become covered with a greasy, sticky layer of foreign matter. If impure water is supplied to a dairy it will affect the quality of the milk. Frequently milk is stored in tanks of water, in creamers, etc. This water is rapidly fouled by the dirt on the bottoms and sides of the cans, by impure ice, milk slopping over, and thus becomes another means of contamination. How are we to keep milk pure? The fact that bacteria are usually attached to larger bodies makes the work of preventing their existence in milk very easy, but with all the care we can give some bacteria will get into the milk. Therefore it must be cooled as soon as possible after milking or separation and held at a low temperature to prevent their increase. The first requisite for pure milk is healthy

cows. The milk from an unhealthy or diseased cow should never be put with the other.

The cleaning of the cow is too often considered of small importance. Every milk cow should be curried and brushed daily and the udder and lower parts should always be cleaned just before milking. Some dairymen groom their cows as carefully as horses in the best stables, their coats are kept clean and free from dust. The soft manure should be cleaned from the hips and flanks. It is also recommended to wipe the udder and teats with a damp cloth before milking. Of course all this requires a great deal of work, but it will certainly pay in the end.

A great deal more might be said with regard to the care of milk on the farm, but time will not permit. A great deal might be said about the attendants who milk, how they should keep their hands and clothes clean and also concerning the cow stable; how there should be plenty of light, plenty of bedding, how the manure should be removed before milking time, how the stables should be white-washed or otherwise cleaned from top to the bottom and then thoroughly disinfected, but this is such a large subject that it would only weary you to continue it further. However, these are some of the main points in dairying, which if followed out will make this industry more profitable as well as more respectable. The Danes and Hollanders follow out a great deal more particular rules than I have given to you to-day. So let us all make an earnest effort to uphold our reputation as a dairying country and at the same time make this work more profitable for us all.

DISCUSSION.

Q. Will silage taint the milk ?

A. Miss Helen McAllister, Coventry. No, not from feeding it to the cows, but if the stable is not properly ventilated the milk will take on the taint from standing in the stable where the cows are being fed.

Q. Is silage better than dry fodder corn for milk ?

A. Yes, silage is the best bulky food, on account of its succulent nature. It is as near green pasture as any fodder that can be had.

Q. In skimming shallow pans would it not be just as well to use your finger in place of a knife to loosen the the cream from the edge of the pan ?

A. No, you would not get the cream off the sides of the pan so well. In using your finger the cream would adhere to it and the sheet of cream would form in creases; the skim milk would run on top and go off with the cream, making it porous in quality.

Q. Is "culture" the same as "starter" ?

A. Yes, it is considered a more suitable name.

Q. What do you mean by pasteurizing ?

A. Pasteurizing is heating the milk to 160 degrees Fahrenheit; allowing it to stand at that temperature for twenty minutes, then cooling to between 60 and 70 degrees Fahrenheit. Then add the culture and allow it to ripen. By doing this we drive off food flavors and kill a great number of undesirable germs. It also gives more uniformity and better keeping quality to the butter.

Q. Would it be any extra expense for the farmer to pasteurize milk for butter making ?

A Not necessarily. The cream can be put in a pail and set in a pot of hot water.

Q. Would it do to cool milk by setting the deep cans in snow ?

A. No; it has not proven satisfactory to set deep cans out in the snow. The snow melts away from the sides and only acts as a protection instead of allowing cold air to circulate around the cans. Setting in water with snow or ice is the best plan for both winter and summer.

Q. How does pasteurizing affect the flavor of butter ?

A. The flavor is not so high as when the milk is not pasteurized, but you have a more uniform product and a better keeping quality. The higher the temperature for pasteurizing, up to 185 degrees Fahrenheit, the better the keeping quality of the butter.

Q. How much culture do you add to the cream ?

A. About 15 per cent. if you wish to churn the following day, that is in twenty-four hours; and 7 per cent. to be ready for churning in forty-eight hours.

Q. How do you add coloring to the cream ?

A. I use a teaspoon to measure the coloring. A teaspoonful is equal to one dram. First dip the spoon into the cream to prevent the coloring from sticking to it. Put the coloring into the spoon and pour it into the cream that is already in the churn.

Q. Do you think it best to send the milk to a cheese factory or creamery ?

A. I prefer to send it to the creamery.

Q. Do you wrap the butter as soon as it is printed?

A. Yes; it saves handling of the butter and protects it from becoming tainted, at least to a certain extent.

Q. How do you tell good butter paper ?

A. By wetting the paper. If it is good paper it becomes tougher by wetting. Water decays poor paper.

Q. Do you use salt in the water to wet the paper ?

A. No, it is not necessary. When dry the salt will form on the outside and give a rough appearance to the package.

Q. How do you salt butter in the churn ?

A. When salting in the churn have the butter washed and in granular condition, about like wheat grains. Then sift on half the salt, giving the churn a turn to turn the butter over; then add the remainder of the salt. Give six revolutions of the churn and allow to stand for ten minutes. Then revolve the churn until the butter is in two or three large lumps. Allow it to stand for a couple of hours, then take out and wash. Use a little more salt, as considerable goes off with the brine.

Q. Do you consider it a good practice to salt in the churn ?

A. Yes, the butter does not require so much working, and consequently the grain is not so liable to be injured. In warm weather the butter is not exposed so much to the heat.

Q. Would you recommend a woman to have a separator if she had to run it herself ?

A. Miss Alice Hollingworth, Beatrice. Yes, I would rather turn a separator than go back to the old system. At the same time I consider it heavy work and do not propose to do it while there is a man on the premises.

Q. Do you wash the separator every time you use it ?

A. Yes, although some agents will tell you it is only necessary to run some water through after the milk. It should be taken apart every time. Wash first in tepid water, then in hot water and finally scald.

Q. How many cows should a man have to make it worth while to have a separator?

A. If you have one good cow it will play you to have a separator.

Q. What is the difference in profit between using a separator and gravity raising?

A. We realized an increase of 60 cents per cow per month in the winter. Our milk goes to the factory in summer, but we consider it worth while to keep a separator for the winter.

Q. Who should do the milking ?

A. Prof. Dean (Ontario Agricultural College) says it is most profitable when women milk, because they are more gentle than men, and cows respond to gentleness with more milk. I would recommend that women teach their boys to be gentle and also teach them to milk.

THE ABNORMAL FERMENTATIONS OF BREAD.

By Prof. F. C. Harrison, O.A.C., Guelph.

An address delivered at the Canadian Master Bakers' Convention.

I presume that most of you present at this meeting have come here with the spirit of the Athenians of old, "either to tell or to hear some new thing," but in

giving you a brief address I shall have little absolutely new information to bring before you, as the experimental work in my laboratory has this year been along other lines than bread-making. Hence I must fall back on a topic which I hope will be of some use to you—I refer to the abnormal fermentations of bread. But before taking up this subject I shall state for the sake of clearness that fermentation is a term applied to certain chemical changes which are associated with and inseparable from the life and development of certain organisms, which are so minute that we term them microscopic or more briefly micro-organisms. The normal fermentation of bread with which all bakers are familiar is due to the energy of the yeast plant, growing in the dough and producing in that substance certain changes, the results of which make bread palatable and digestible.

Any other fermentation going on at the same time as the normal one or arising after the bread has left the oven, must be looked upon as abnormal and inimical to the baker and his product.

As I have already said, these abnormal fermentations are associated with life, but the individuals are so small that the ordinary observer cannot see the actual organism but only the results that they accomplish; and so we must first consider how these organisms or bacteria get into the bread. The following are the possible sources of contamination :

1. From the flour.
2. From impure yeast.
3. From the air or from water, milk or dirty utensils.
4. From badly prepared or unsterilized yeast food.

Bakers should recognize that flour or dough is at all times open to infection by bacteria from one or other of the above mentioned sources, but by a knowledge of the conditions under which these microscopic plants grow, and by the exercise of scrupulous cleanliness they should be able to control and direct the fermentation along right lines.

The commonest abnormal fermentation of bread is known as sour bread, which means that the odor and flavor of the bread are sour to the senses of smell and taste. This sourness is fairly common ; statistics which I have gathered from various sources, principally from small towns in the United States, with populations ranging from 7,000 to 25,000, show that the percentage of sour bread was 26.. a rather high figure. From the number of references in the literature on baking, we must also admit that the trouble is a common one. It was left to a bacteriological examination to discover the right cause of souring. Briant's researches have been the most important, and the limited number of my own experiments fully confirm this writer's results.

Sour bread is caused by lactic acid bacteria associated with (but in far less numbers) butyric acid and acetic acid, producing bacteria. These bacteria are especially numerous in low-grade flours, in fact, the poorer the flour the larger the number of injurious organisms. Prescott has lately shown that flour may contain bacteria undistinguishable from the colon bacillus, the most numerous inhabitant of the intestines and a germ that produces acidity. This organism is certainly more liable to be found in poor than in high-class flours.

Lactic and butyric germs are also commonly found in poor flours, where they remain in a dormant condition until provided with the essentials necessary for their growth, namely, moisture, a sufficient temperature, and proper and adequate food supply. The food supply naturally surrounds them, and when water is added to the flour and the temperature is raised to between 70 and 80 degrees Fahrenheit, they are able to reproduce with remarkable quickness and rapidly manifest their presence by the products they form. Dough, with considerable moisture present, or as you term it "slack," gives the bacteria a better environment and consequently sourness is more apt to increase rapidly in such doughs. Temperature also plays an important part ; the best temperature for growth of most of the acid-producing germs is about 97 degrees. Hence if these high temperatures are present, bacterial activity will be greatly increased.

Acid germs are also present in many samples of yeast. We have analyzed a large number of yeast samples used for bread-making purposes, and many of them contained injurious bacteria in large numbers; in fact, some of them had more bacteria than yeasts, a state of affairs which is very serious, as the alcoholic fermentation will be weak and thus give the bacteria a good opportunity to grow; for in dough we find that there is always a struggle for existence going on with the survival of the fittest.

If, on the other hand, the normal alcoholic fermentation is at first vigorous, and then commences to stop, it gives the bacteria opportunity to grow. Hence, "overproved" dough is especially liable to become sour.

Nor must we forget that dirty utensils, either tubs or troughs, harbor injurious bacteria, which are able to reproduce enormously when given favorable conditions. All cracks and crevices which harbor food are teeming with life, usually undesirable from the baker's standpoint, and, therefore, absolute cleanliness should be the rule in every detail; for to be forewarned is to be forearmed.

Lastly acetic bacteria or those which produce vinegar and which are often present in flours, sometimes cause trouble, and as these bacteria require a plentiful supply of oxygen, it has been suggested that all dough should be kept as much as possible out of contact with the air; but we doubt if such a remedy is practical, as the lowering of the temperature follows the removal of covers on the dough troughs and retards the whole course of fermentation.

Sticky, Slimy or Viscous Bread. This affection is not nearly as common as the preceding, yet the number of cases recorded is quite large, and this abnormal fermentation is frequently met with in country districts.

As the name implies, the bread, usually the crumb near the centre of the loaf, is slimy or sticky, forming short threads if the finger is pressed against the cut surface of the bread and withdrawn. The stringiness increases with age, a proof of the living nature of the trouble. Cases of sticky bread usually occur in the warm summer months, the high temperature favoring the growth of the bacteria which produce the trouble.

From this sticky bread it is comparatively easy to isolate an organism which when placed in sterilized (i.e., germ free) bread is able to produce the stickiness met with under natural conditions, thus proving the relation of bacteria to the trouble.

The specific germ causing stickiness is a very common inhabitant of the soil, and is usually present upon the skins and "eyes" of potatoes, and where these tubers are used for making a brew or ferment, there is a danger of introducing the slimy germ, unless the potatoes and the mash are properly sterilized.

The slimy germ, which is known as the "potato bacillus," on account of the frequency with which it is met with on potatoes, is also found in yeast cake. I have repeatedly found this germ present in both dried and compressed yeast cake, and given favorable conditions for rapid growth, it might produce epidemics of slimy bread at any time. This particular bacillus forms spores—a form analogous to the seed of higher plants and which can resist unfavorable conditions. Hence it is very resistant to heat and is able to withstand the baking temperature quite readily; in fact, at no time is the heat of baking high enough to kill the spores of this bacillus.

This germ is occasionally met with in milk.

This affection may be controlled by using absolute cleanliness in the yeast tubs and kneading troughs, the proper sterilization of the brew or ferment by the use of a certain quantity of hops; for in a number of experiments we have made with hop extracts we have found that even a small quantity of good hops (1-2 ounce to the gallon) has great antiseptic power and hinders the development of the potato bacillus, without injuring the activity of the yeast. The bread should be kept in a cool place after baking, for this stickiness is most prevalent during hot weather, and a cool temperature prevents the rapid growth of this injurious bacillus.

Musty or Mouldy Bread. Musty or mouldy bread is, as a rule, only met with after the bread has been cut and allowed to stand several days. Occasionally, however, we find bread only one day old affected with mustiness. This affection has been the subject of several investigations, the results of which agree in the main points. The specific organism is a mould called Mucor mucedo, which has a certain action on bread, producing a musty odor without decomposing the bread, but the chemical composition of the bread is changed by the growth of this mould, and this change favors the subsequent growth of any bacteria that may be present. Flours which have become damp or even very low grade flours, may have this mould present in large quantity, and although the organism is killed by the baking process, yet the musty flavor persists and is present in the baked loaf.

Bloody Bread. Bloody or red bread is not an affection which troubles bakers, but it sometimes makes its appearance in the household. The microbe which produces this affection is of great historical interest, for we read in the pages of Livy, the Roman historian, that the bread of the Roman army turned red, and in consequence 170 malevolent women were put to death, because they were thought to have produced it This same thing happened during the siege of Troy by Alexander the Great. Many a victim of the proceedings, taken against witchcraft during bygone centuries must have been consigned to the stake on the charge of having fabricated the blood red spots that were occasionally found developed on the Host, and which filled the credulous minds of the masses with horror; and even in 1819, the entire Province of Padua was set in commotion by the frequent appearance of such spots and drops on various articles of food. I have also heard of reports of its presence in Ontario, and I had sent me from the vicinity of Cobourg, Ontario, a sample of bread with the characteristic red blotches upon it. Knives brought into contact with the red mass and used again without being cleaned, naturally carried the infection to fresh food, and the pantry quickly became seeded with this organism, much to the consternation of the household, who were at a loss to account for the trouble. By careful disinfection the germs were destroyed, as they are very readily killed, and no more trouble ensued.

This germ is, as a rule, found in dirt and soil. Klein, who investigated an infection of foodstuffs caused by this germ, furnishes the following explanation as to the cause of the outbreak he investigated: The back of the premises, including the pantry, faces southwest; it looks over a churchyard that has not been used for generations; but a few days previous to the outbreak, great disturbances by workmen had been going on in that churchyard, and as about the very time of these disturbances strong southwesterly winds were blowing, it is in the highest degree probable that the microbe disturbed during the alterations from quiet nook and corner in which it had previously settled, was blown by the wind into the premises lying close by and in the direction of the wind; and it is more than likely that this germ had been "lying low" in some spot on or near the surface of the area of the churchyard.

A study of these "outbreaks" teach us the value of storing and putting away food, which on being cut or otherwise prepared, is in a suitable condition for infection with organisms It is also important to keep flies away, for we know of many diseases which are carried by these pests.

BREAD MAKING.

By Miss Blanche Maddock, Guelph.

In speaking to Women's Institute members on the subject of Bread Making I do not pretend to say which is the best method of making bread, because I should not be able to do so. There are a great many "best" methods. Therefore, we can only lay down general principles, which may be applied to all methods.

The object of our Women's Institutes, as I understand it, is not so much to take up what may be termed outside work or study as to begin in the home by taking up our common every-day work and discover, if we can, the science in connection with

it, thus removing very largely, the cause of monotony and drudgery in house work. In order to do this we must commence at the beginning of things, as for instance, in the making of bread, we must first go back to the wheat from which our ordinary bread is made.

On looking carefully at a section of wheat we discover, 1st, a layer of bran; 2nd, a layer of coloring matter; 3rd, a layer of cells containing gluten; 4th, the endosperm, or central portion of the wheat; 5th, the embyro or germ of the wheat, which gives life to the new grain. Studying these different portions of the grain we are enabled to determine those which are best fitted for bread making and the reason why. By knowing this we are able to act intelligently. When we are told by a manufacturer that we have not been using the right kind of bread, that in the ordinary white patent flours all the strength has been extracted and that we should use brown bread or whole wheat biscuits to the exclusion of white bread, we are able to know to what extent he is correct.

We know that bran is composed of a woody, fibrous substance known as cellulose This cellulose is completely indigestible in the human stomach. The second layer, or coloring matter, is found to be of no particular food value, therefore, is of no use for bread making. If, in the third layer, the gluten could be extracted from the cells it would be of great benefit in bread making, but as the cell walls are made up of this cellulose or indigestible material, it is proven, after repeated experiments, that more vital force and energy are required to assimilate these cell walls than any benefit that is obtained from the small amount of glutinous matter which is contained in them.

Brown bread is made by simply crushing the entire grain. Whole-wheat breads are made by taking off the outer layer of bran, also most of the coloring matter, retaining only the layer of glutinous cells. But as a food is valuable not for the amount of protein or muscle-forming food which it contains, but for the amount of digestible protein which it contains, we are forced to the conclusion that after all the white flour or central portion of the wheat, that which contains the starch, sugar and gluten in a digestible form, is the best part of the grain for bread-making purposes.

As there are many different kinds of white flour, it is well to be able to tell a good bread flour from an inferior variety or from the many different pastry flours which are sold at the present time. A good flour will be of a yellow tinge, will crunch slightly between the teeth and will have a gritty feeling when rubbed between the fingers. It should also have a pleasant, nutty flavor.

After we have chosen our flour the next thing is to decide on the yeast to be used. I do not use hop yeast; first, because more uniform results are obtained from the manufactured yeasts. By examining the yeast and discovering what it is, we will readily understand the reason for this. We find that it is a small plant, in fact, one of the lowest forms of plant life. We find also that its growth and habits are very similar to the bacteria that are all around us in the air, in the water, everywhere. As it is these bacteria that cause sour and bad-flavored bread, and as their conditions of growth are so similar to those of the yeast plant, we can readily see that in order to have a good yeast it is necessary that all injurious bacteria be kept out. This cannot be done in the home, but in large factories every precaution can be taken; even the air being filtered into the room where the yeast is made. Second, Because the manufactured yeasts save time and labor. I think this is one of the ways the members of our Institutes may lessen their work very materially. The old three-day method of making bread (preparing the yeast one day, setting the sponge the second day and kneading and baking the third day) is fast disappearing.

The method that I have found most satisfactory is as follows: Dissolve a yeast cake in warm water for about twenty minutes, or until bubbles appear on the surface. Have the flour warming while the yeast is dissolving (always keep flour in a warm, dry place), mix in the salt with the flour, make a hole in the centre where the dissolved yeast is poured in, and mixed into a batter. Gradually add more

water at the same temperature (about 100 degrees Fahrenheit) and continue mixing the flour until nice, spongy dough has been formed. Knead thoroughly. The stronger the flour, or in other words, the more gluten there is in the flour, the more kneading it will require. This should all be done in the evening. Next morning form into long narrow loaves and leave to rise. When they have about doubled their bulk, put in a medium hot oven and bake slowly.

Some of the Main Points to Which We Should Pay Attention in Regard to Temperature.

Be sure the flour is warm and light before setting the bread. Cold, heavy, flour prevents a uniform working of the yeast, consequently the texture of the bread is destroyed.

Be sure the water is at the right temperature. In bakeries the temperature would be about 80 degrees Fahrenheit, but in the home smaller quantities are used and the temperature of the room is not so uniform, therefore, a higher temperature must be used (about 100 degrees Fahrenheit). Too hot or too cold water will prevent the yeast from working.

Be sure the temperature of the oven is right. If it is too cold the bread will become excessively light and crumbly, and if it is too hot the crust will harden before the gas has had time to work through the dough and escape. Large air-holes under the crust will be the result.

DISCUSSION.

Q. Why is it that wheat bread rises so much more readily than rye, barley or other grains ?

A. Miss Blanche Maddock, Guelph. The part of the grain that causes the rising is the gluten. Rye and barley do not contain gluten in the same form as the wheat grain.

Q. Why is bran injurious for people when it is so beneficial for cattle ?

A. Because the digestive organs of cattle are especially adapted to digest coarse fodder. They are entirely different to those of the human being.

Q. Would you advise using potatoes in bread to keep it moist ?

A. That would depend very largely on the individual taste and experience. I think potatoes have a tendency to keep the bread moist a longer time, and they certainly do not injure the bread. By adding potatoes to bread we are increasing the starch constituent, which already makes up the greater part of the bread, thus making it a one-sided ration.

Q. What about skim milk for bread making ?

A. Skim milk is excellent for bread making, as skim milk contains the bone-forming elements which are lacking to some extent in flour. It also improves the flavor and gives rather a closer texture to the bread.

Q What is the cause of heavy bread?

A. One cause is too much yeast for the strength of the flour. In the process of bread making the yeast forms gas. This gas works up through the dough and is caught in the gluten, a sticky substance which expands, and forming little pockets or cells holds the gas until the heat of the oven hardens the cell walls and drives off the gas. If there is too much yeast the excessive gas formed works up through the dough and breaks these gluten cells before they are hardened by heat, and escapes, causing, as we say, the dough to fall. Heavy bread is sometimes caused by the sponge or dough being chilled while rising.

Q. What is the cause of large holes between the crumb and crust ?

A. This is due generally to the oven being too hot. The crust of the bread is hardened by the heat before the gas has had sufficient time to work through the crumb. When it reaches the crust and cannot escape it forms these holes between the crumb and the crust. In order to prevent this the oven ought to be of a moderate heat, and it is well also to prick holes on the top of the loaf so as to allow for the escape of gas.

Q. Why is the crust of bread more easily digested than the crumb.

A. Because the heat of the oven changes the starch cells on the surface of the loaf into sugar; thus one step in digestion has been accomplished.

Q. Is brown bread better than white bread for dyspeptics ?

A. Yes, because it contains a certain amount of rough material that passes through the system more readily than concentrated foods.

Q. Why is baker's bread usually lighter and whiter than home-made bread ?

A. Because soda and alum are used, but they are injurious to the system.

Q. How long should dough be kneaded ?

A. That depends on the strength of the flour. A flour rich in gluten will require considerably more kneading than a weak flour. If thoroughly worked the first time one kneading will be sufficient.

OUR DAILY BREAD.

By Miss Laura Linton, Guelph.

Bread is one of the earliest, most generally used and most important forms of food adopted by mankind. With good bread the plainest meal is a feast in itself. Without it the most elaborately prepared menu is unsatisfactory. Bread making is at once the easiest and the most difficult branch of culinary sciences—easy if the elementary principles are mastered and followed, difficult if there be any neglect to use proper care and materials. It should be regarded as one of the highest accomplishments, and if a fraction of the time and thought which are expended upon fancy cooking were devoted to this most important article of food, the sale of remedies for digestive ailments would be appreciably decreased.

As bread is used in every household almost every day in the year its food value is of interest to us. Life could be sustained indefinitely upon bread alone, but the body would not be properly nourished. Fine wheat flour contains about seventy-five per cent. starch and about ten per cent. nitrogenous matter, but is quite deficient in fat. Bread and butter make an almost perfect food, forming a fairly well "balanced ration."

Of all the cereals, wheat yields the best flour for bread making. This is due to the fact that it is the only grain which contains the constituent, gluten, in the proper proportion, and of the desired quality, essential to making light, spongy bread. When the starch is washed out of a quantity of flour, the gluten will remain as a greyish-yellow, tough, elastic substance, which can be drawn out into threads. It is the most valuable part of the wheat, being the proteid or flesh-former.

The greater part of the wheat grain is starch. That part of the starch lying nearest the bran cells contains the most gluten. As this part of the starch is hard and closely attached to the bran, much of it is lost in the manufacture of our white flour. A great quantity of the mineral matter—that which goes to form the bones and sustain the nerves—is also carried off in the bran. Those who advocate the use of whole wheat flour, maintain that because of these losses our wheat flour has degenerated into a lifeless and unsatisfactory food.

While it is true that whole wheat is richer in some valuable constituents than white flour, and that in the system of some persons it has a most beneficial effect, it does not necessarily follow that bread made from it furnishes more nourishment than white bread. Whole wheat flour contains bran, and bran is composed largely of cellulose. Cellulose is practically indigestible to the human system. A certain amount of it in our food is a necessity, but taken in this form it is not only undigested itself, but owing to its thick coatings it protects from the action of the digestive juices a large proportion of the nutrients contained in the flour. It also acts as a mechanical irritant and is hurried along the digestive tract too quickly for complete assimilation to take place. From practical tests it has been found that white bread furnishes more energy than an equal weight of whole-wheat bread.

Good flour should be creamy-white in color, should not pack easy, and when squeezed in the hand should fall apart when the hand is opened. It should have a grainy feeling rather than a velvety touch. Velvety flour contains more moisture

and lacks the body of the hard flour. When eight or nine months old, flour is usually at its best. It should be kept in a dry, cool place as it readily absorbs moisture, the gluten looses its tenacity and the bread is coarser and heavier. Flour is almost as sensitive to odors as milk, consequently should be kept in a pure atmosphere.

Liquid yeasts made at home seem to be most generally used, and for bread that will keep well will have a clean, sweet taste in the mouth, and yield the most in bulk from a given amount of flour There is nothing equal to a perfect home-made yeast bread. We add yeast to the flour in order to make a bread that will be light and spongy. Any fluid will penetrate more quickly through a sponge than through putty, and the digestive fluids are no exception to this rule. Bread made with a mixture of flour and water and baked at once would be close and dry and difficult to masticate and digest. Good bread should be of such a light, spongy texture that the greatest possible amount of surface is presented to the action of the digestive juices. To obtain these qualities we should expand the dough as much as possible without destroying the sweetness. The process by which the expansion is brought about, due to the yeast, is one of fermentation.

Yeast is a tiny plant, one of the simplest forms of vegetable organism in existence. In order to grow it requires a fair degree of warmth, moisture and starch or sugar to feed upon. When placed in the flour, to which some warm liquid has has been added, it finds all the conditions necessary for growth and begins at once to reproduce. It buds off in every direction and multiplies into many millions to the cubic inch. It feeds upon the starch, changing some of it into sugar and the sugar into alcohol and carbonic acid gas. This gas, because of the warmth, expands and being lighter than the dough, rises and in its efforts to escape, expands the elastic mass. Right here is seen the importance of the gluten. If it were not present the gas would very readily break through the walls of the bubbles it forms and escape, and the bread would fall, but because it is present the walls of the bubbles are tough and elastic, will expand without breaking, and keep the gas confined to the dough.

We may take it as a general principle that the slower any fermentation takes place the more desirable the product, and this principle applies to bread making. On the farm, as a rule, it seems more convenient to set the bread over night, and bread made in this manner is better than bread made in a few hours. It may neither look better or taste better, but it is more wholesome. Some of the constituents of the flour are by the action of the yeast partially digested. This is a slow process and in rapidly-made bread has not time to take place properly.

Milk will make a whiter and more nourishing bread than water. Water bread will keep moist longer. The addition of a small amount of shortening will make bread tender. Butter is the most wholesome; lard will make whiter bread. Separate pans for each loaf are advisable, the loaves are better shaped, more evenly cookd and more wholesome. The sweet, nutty crust of the bread is partially digested in the process of baking. When taken from the pans the bread should be set where the air can circulate freely around it. An old window screen with cleats on the ends makes an excellent bread cooler.

DISCUSSION.

Q. Should bread be covered while cooling?

A. Miss Laura Linton. If you like crisp crust do not cover the bread, but for the tender, wafer-like consistency that some prefer it should be covered with several thicknesses of cloth. It is best left uncovered.

Q. What is the best receptacle for bread?

A. A tightly covered tin box or stone jar, which should be scalded and sunned twice a week.

Q. Why is the crust of bread sweeter than the crumb?

A. The starch, because of the intense heat of the oven, is changed into dextrin, a form of sugar. This change takes place all over the surface of well-made toast. The

dextrine is soluble in water, consequently toast water contains a considerable amount of nourishment.

Q. Should potatoes be used in bread ?

A. It is false economy to substitute potatoes for flour. Potatoes are very deficient in flesh-forming material and potato starch is much inferior to wheat starch.

Q. What is the best temperature at which to keep bread while it is rising ?

A. 70 to 80 degrees Fahrenheit. If over 90 degrees there is danger of souring. An excess of heat will readily kill the yeast plant. It can stand a considerable amount of cold, however, without injury. Bread will rise in a refrigerator, if left long enough, and have an excellent flavor, but such a temperature is not the best.

Q. What causes sour bread ?

A. The fermentation is allowed to continue until the alcohol changes to acetic acid.

Q. Why is it difficult to make pastry from good bread flour ?

A. When pie crust stretches under the rolling pin there is small chance of satisfactory pastry. This stretching is due to the elastic gluten. The more gluten the better for bread, the less gluten the better for pastry. Pastry flour is made from soft wheat, poor in gluten.

Q. Why does wheat hold first rank as a cereal ?

A. Mrs. Colin Campbell, Goderich. On account of its nutritious value and the fact that it not only contains food for every part of the body, but the properties are in almost the correct proportion.

Q. What are your most serious objections to flour made from the entire wheat grain ?

A. Such flour cannot produce as white a loaf and it is doubtful whether the cerealin is thoroughly digested by the human stomach.

Q. Is bran of no value in flour.

A. The value of bran in flour, unless it can be ground more finely than at present, is at least questionable.

Q. Is there any rule given by which an inexperienced person can determine the grade of flour?

A. No. The best bread flours in the market are of a yellowish-white tinge. Never buy that which has a blue-white tinge. Good flour adheres to the hand. Poor flour is not adhesive and may be blown about easily.

Q. Are there any ways of testing the temperature of the oven without a thermometer ?

A. Place a teaspoonful of flour on a plate in the oven. If it browns in five minutes the oven is hot enough for a loaf of bread. If in one minute it is right for rolls, or if you can hold your hand in the centre of the oven until you can slowly count twenty, it is about right.

Q. Why does the centre of the loaf never become hotter than 212 degrees F.?

A. Because of the moisture present.

Q. When do you consider the proper time to add the salt ?

A. Salt tends to retard fermentation and consequently should be added toward the end of the mixing.

Q. Who is to blame for the inferior quality of bread supplied to the public by the bakers ?

A. The public. They have not yet recognized the paramount importance of obtaining bread made from the best grades of flour and by the best approved methods.

Q. If the bakers were to use the best grades of flour and more approved methods would they not have to charge a higher price for their bread ?

A. Try to educate people in this respect, so as to be able to see the gain, to the body of really first-class bread, and of appreciating this fact that a baker cannot use the very best flour, apply the most approved methods of manufacture and employ thoroughly competent men, unless he charges a fair price for his products.

Q. How long should bread be kneaded ?

A. It must be kneaded long enough for the dough to lose its stickiness and become soft and elastic. This may take from twenty to thirty minutes.

Q. How may an inexperienced person tell when the dough is light ?

A. When risen just enough it should be soft and velvety, but not sticky to the touch, and very elastic.

Q. What is gluten ?

A. Gluten is one of the most important constituents of the wheat grain; a sticky, tenacious, nitrogenous substance, which enables the dough to retain the gas formed in it.

Q. Which contains the most gluten, hard or soft wheat?

A. Hard wheat.

Q. How many kinds of yeast are used for bread making ?

A. Three kinds ; liquid (home-made or bakers'), dry and compressed yeast.

Q. At what temperature should dough be kept when rising ?

A. About 75 degrees Fahrenheit.

Q. How do you make good bread ?

A. Miss Laura Rose, Guelph. It certainly is an art in which every farmer's wife should be skilled. In the first place, so much depends on the flour, and these days much of it is not very good. Get flour made from hard gluten wheat. See that the yeast is fresh and strong. Give the dough a thorough kneading and keep it warm.

Q. Why do people use for bread the water potatoes are boiled in ?

A. Owing to the water containing some of the starch, a constituent of the potato. The addition of potatoes to bread makes it more moist.

Q. How can you tell a good bread flour ?

A. Mrs. A. Kinney, Grandview. One of the simplest methods of testing bread flour is to take some flour in the left hand, add a little water and with the right forefinger mix a rather stiff dough in the hand. If the flour is good the dough will become stiffer and dryer with working and have an elastic, rubbery feeling. If the flour is of inferior quality the dough will become soft and sticky. Flour that is of a bluish-white shade or that feels soft and salvey, and when balled together in the hand remains in a lump, should be avoided. The more glutinous flour has a very noticeable yellow tinge.

Q. Can more bread be made from a given weight of hard flour as against soft flour ?

A. Yes, in weight. The soft flour absorbs less water than the hard, spring-wheat flour. It also requires more kneading than spring-wheat flour to make a choice quality of bread. More delicate cake and pastry can be made from winter wheat flours. Pastry flour is simply soft wheat flour.

Q. Is brown bread healthful ?

A. The coarser flours with the particles of bran often increase the paristaltic action of the intestine and thus tend to prevent constipation, but for a healthy person its claim of superior value is very questionable. Entire wheat and various other special flours may be desirable for the variety they afford in bread making, but white bread yields the highest percentage of digestible nutrients.

Q. In what proportion do you prefer using the hard and soft flours?

A. We are well pleased with results from equal proportions. Though rather a coarse-grained bread it has a delicious, nutty flavor; can be easily masticated and does not become compressed, but crumbles in the mouth when quite fresh.

Q. Do you have the miller blend them ?

A. No, we buy them separately and find it more satisfactory.

Q. Do you put in the salt when setting the bread sponge ?

A. No, it is best to add the salt after the sponge has risen.

Q. Do not the more starchy flours make a whiter, nicer-looking loaf ?

A. Yes, but we have cared too much for color in flours, to the detriment of more

substantial qualities. The more glutinous flours are tissue builders, while they also furnish energy. The soft flours are fat and heat producing.

Q. Do you think it much cheaper to make bread than buy it ?

A. Yes, it is much cheaper.

Q. Why do you prefer setting the bread in the morning ?

A. We find it to be much less work.

Q. In what way most particularly ?

A. It is an unwelcome task when we find ourselves very tired at the close of the day, and also more work in the early morning. We all know what a risk we run if we do not mix our bread when it is light.

Q. You use a large quantity of yeast ?

A. Yes, the quicker we can make our bread the better. If we are a long time baking the bread the alcohol will be at work doing mischief. If the yeast is good and sweet do not spare it, the bread will not taste yeasty, as the gas is evaporated by the baking process.

Q. What is your test for heat in oven for baking bread ?

A. Our old reliable is holding the hand in the oven long enough to count fifteen. Another plan is to sift a little flour in a pan in the oven. If it browns nicely in five minutes the oven is hot enough.

Q. How long will it take a medium-sized loaf to bake in an oven at that heat ?

A. About one hour. Much of the indigestibility of bread is owing to imperfect baking. The scientific method of baking bread is to fix the air cells as quickly as possible at first. This can be done by baking the bread in small loaves in separate pans, thereby securing a uniform heat and more crust, which is the most easily digested part of the bread.

Yeast Recipe. Take 24 medium-sized potatoes, which after being boiled and mashed, are mixed with the water off the cooked potatoes; then add one quart of cold water. Put 2 tablespoonfuls pressed hops into one quart of cold water, and when it comes to a boil, strain and pour over; 3 tablespoonfuls of flour, 2 tablespoonfuls of sugar, 1 tablespoonful of salt. Then mix together, and when cooled to a temperature of from 75 to 80 degrees Fahrenheit, add 2 yeast cakes (previously soaked). Let the yeast stand at least 24 hours before using, stirring often.

This yeast may be used for three-hour bread. Half the quantity, adding no water, will make a baking of six fair-sized loaves, setting the bread in the morning.

Q. Do you allow the yeast to stand in a warm place while rising ?

A. Not close to a stove, but in a warm room, at a temperature of 65 to 70 degrees Fahrenheit. Then set it away in a cool place where it will not chill or freeze; the cellar preferred.

Q. Do you warm the yeast before setting bread ?

A. Yes, the night before setting bread bring the yeast from the cellar. In the morning heat the yeast to a temperature of 70 to 80 degrees Fahrenheit, also having the flour at a temperature of not lower than 65 degrees Fahrenheit. Flour should be kept at that temperature in winter and away from any contaminating odors. It is quite as necessary to use a thermometer in bread making as in cheese and butter making.

Q. Why do you prefer using hops in the yeast ?

A. They give strength to the yeast, also a wholesome flavor, and also tend to kill unwholesome bacteria.

Q. Which is preferable, setting a sponge or mixing it right up stiff and moulding into loaves ?

A. Setting a sponge is preferable, especially if the housewife is alone and she can hurriedly beat up the sponge before breakfast; and after the breakfast work is away and the little ones off to school the sponge is usually ready to mix and knead right into loaves. Knead each loaf for twenty minutes, or if a rather small baking knead the whole mass for an hour.

BREAD MAKING.

By Mrs. Wm. McMaster, Stella.

No doubt you will all be amused at my telling how to make bread, when I am sure every lady here can make better bread than I can, and many take prizes at the annual fair. I am not going to tell you how to make bread, I am only going to try and tell you how I make it.

I use potato yeast, or as it is called by some, "Railroad Yeast." Take two quart dippers full of peeled, sliced potatoes and put them on the stove to boil in one quart of boiling water. When cooked, mash with a potato masher in the water they are boiled in. Then put through a colander. In a crock put two heaping cupfuls of flour, half a cupful of salt, half a cupful of sugar and one dipperful of cold water. Stir until smooth and then add the potatoes and two dipperfuls of boiling water. Let the hot water run through the colander, which has the potatoes in it, into what is in the crock; and last add one dipperful of cold water. Set aside to cool until luke warm, then add two yeast cakes, which have been soaking in tepid water for a quarter or half an hour. Put a cover on the crock and wrap something around it to keep it warm. In winter, put a couple of warm (not hot) bricks under it. When light, which is generally the next day, empty into jars or sealers and put in the cellar, when it is ready for use. In summer I only make half the quantity as it does not seem to keep so well in warm weather.

Those of you who still use the old-fashioned, wooden bake tray, I would advise to just try the covered tin ones, they are so light to handle and easy to keep clean. We should be as particular about our bread tray, kneading and baking pans as we would be if they were milk vessels. Yes, and what we keep our bread in also. It should get a sun bath at the very least every time we bake. I have read it should get it every other day in summer. Anyway, I am sure it would do no harm.

On baking morning, sift the flour into the bread tin. If cold weather, warm it by putting it in a dripping pan with a paper under it (under the flour, I mean) and setting it in the oven, placing two little sticks under the pan to keep it off the bottom of the oven. Stir occasionally until it gets warm, but not hot. Some of the bread tins will go in the oven and the flour can be warmed very nicely in them and it saves emptying. Be careful not to let the flour get too warm or to let it stick to the bottom of the pan.

For every quart of the yeast I use I take nearly the same amount of tepid water. Put the yeast in a tin, set it in hot water and stir constantly until luke warm; stir in the flour, add the water and salt, a heaping tablespoonful; stir all as thick as can be stirred with a spoon; cover up nice and warm and put in a warm place to rise. In cold weather put warm bricks under it. When light, which usually takes an hour, sometimes it takes more and sometimes less, mix with your hands until it gets stiff. Next time it is light, knead into loaves on the kneading board and put back in the tins. When light the third time, knead into loaves, put part into the baking tins and the rest back in the bread tin. Cover with a clean cloth, which is kept for the purpose. When light put in a warm oven. If the oven is too hot it forms a hard crust and the bread does not seem so light. I hope the day is not far distant when we will all use thermometers when we are cooking as well as when we are churning.

The pans that I like best are the ones that hold two small loaves about two inches deep, and are made of sheet iron. Let the bread bake one hour and take out of the pan and turn upside down to cool. Hot bread should not be covered.

Parker House Rolls. In the morning, if you want rolls for tea, scald one pint of sweet milk and when luke warm add two tablespoonfuls of sugar and two of lard or butter; a little salt, one pint of the potato yeast which has been made luke warm, and flour enough to thicken; cover and set where they will be warm, and when light knead them on the kneading board. Let them rise again and when light, knead and roll out; cut with a large cutter; butter the tops, fold over, and let rise and bake.

HOME-MADE BREAD.

By Miss G. Peacock, Springfield.

It has been said that "bread is the staff of life;" if it is to-day, then it is to many of us a very disagreeable staff. Some bread looks good and tastes good, but contains very little nutriment. Then we have bread that neither looks, tastes or feels good. I believe the latter to be the most general among our farming population of to-day, and is eaten at a great risk of disordered digestion. It is tasteless, dark, heavy and repelling. Now the farmers earn their bread by hard, honest toil and should have the very best bread. There is nothing in all of our domestic life that affects the health and happiness of the family more than the quality of our daily bread. Good bread and butter is fit for a king. Poor bread and butter makes us all feel as heavy and sad as the bread.

To make bread is the easiest as well as the most difficult of sciences, easy, if we have sufficient interest to master a few principles of bread making, difficult if there be neglect to use proper care and materials. To get the materials is the first thing. We will first examine a wheat kernel. The chemical analysis is :

	Whole Wheat.	Fine Flour.	Germ.
Water	12.5	13.0	12.5
Albuminoids	13.5	10.5	35.7
Starch, dextrine	68.4	74.3	31.2
Oil	1.2	.8	13.1
Cellulose	2.7	.7	1.8
Mineral	1.7	.7	5.7

You will notice the large percentage of mineral matter in the germ. It is mostly phosphoric acid, a substance required in the brain. Prof. A. H. Church says the germ should be in the flour to make good bread.

The wheat grain contains a little germ, starch cells, gluten cells (inner coat of bran or coloring of bran), endocarp, epicarp and epidermis. The last three constitute the bran and are a protection for the life of the future plant. Starch supplies to us heat and energy; gluten, bone and muscle. Starch is insoluble in cold water and is a snow-white glistening powder.

Wheat gluten is divided into four albuminoids, viz., gluten fibrin, gluten casein, mucedin and gliadin. Gluten is a yellowish-grey, tough, elastic mass. In a mixture of flour and water, it gives it the property of yielding a sponge which is hardened by baking.

The bubbles which make the dough light, are produced in different ways, the most common way being the yeast fermentation, which is considered the best by cooks and scientists. It produces rapid alcoholic fermentation in organic substances containing starch and sugar.

Yeast is a colorless vegetable plant or germ of the fungus order. It grows by multiplication of its single cells, many millions being soon produced in a single cubic inch of suitable food. Yeast, with the help of heat and moisture, which is necessary for its culture, changes starch into sugar, then changes the sugar into alcohol and carbon-dioxide or carbonic acid gas. The gas being so much lighter than the dough rises in its effort to escape and makes the mass much larger than when first mixed. The toughness of the gluten prevents the gas from escaping. Further action of the ferment weakens the gluten, and if left too long your dough will fall. Be sure to bake the dough before the fermentation has turned to the acid stage and before the tough gluten walls are broken by gas.

The heat in baking further expands the gas, hardens the gluten walls, kills yeast plants and sets the alcohol free.

We may now begin with a wheat grain and compare the growth, beginning in the tiny seed and germ. It is the same as a chicken in the egg supplied with food for a short time. We find the action of growth is much the same as the yeast in

bread making. The germ contains a natural ferment called diastase. When the kernel is placed in proper conditions (heat and moisture) it begins to expand, the diastase begins to act on the starch changing it to dextrin, alcohol and carbon-dioxide.

Baking Powder Breads. 1st, Get good flour by finding a good miller or dealer; 2nd, Good yeast; 3rd, Warm water; 4th, A little care, and bread making is then a very easy thing. Use a china, porcelain or granite dish. Never use tin or cheap glazed crocks, the former is easily scraped off and the latter has lead in the glazing and is injurious.

Early in the morning mix yeast, water and flour in a suitable dish, mix with a wooden paddle or better a limber knife, you can clean out the dish much quicker and easier. You may mix it to a drop batter or a stiff dough and turn it out on the board at once and knead it about five minutes, then return to the crock and let it rise until double in size, then take on the board and knead about fifteen minutes or less if you like, using very little or no extra flour. Mould into small individual loaves, set in a moderately warm place, let it double in size, then bake it thoroughly. Do not let it burn at all, if you do it will be half done, pasty and unwholesome. When done turn out of pans and cool across a couple of wires or a sieve, then put away in a clean place and do not eat it until it is cold.

A SHORT TALK ON A FEW OF THE VEGETABLES.

By Mrs. E. M. Torrance, Chateauguay Basin, Que.

As all vegetables have a somewhat different composition they have varying uses as human foods. Vegetables alone cannot sustain life, yet a fresh, crisp salad on a hot July day is an acceptable addition to any table. Our systems need some green food, and until spring comes we should do what we can to supply ourselves with these needed greens. Many people do not understand how necessary it is to our well being to use some green food in winter. Minced parsley (and any one can grow a box of parsley) added to a dish of creamed potatoes served at breakfast, pleases our eyes as well as our stomachs. Many people say these things take time; not so, if you go about it in the right way, and when one thinks of it, after all it is the little things that give the finish to any table.

Water cress, if crisp and fresh, is always delicious, and is easily grown, but one must be careful in cleansing all such greens. Romaine lettuce has a longer, narrower leaf than ordinary lettuce and a slightly bitter taste, which is agreeable in the spring time.

Asparagus is a very wholesome vegetable and has a known value in purifying the blood. Its season is not a long one, but if once a bed is planted and given a little care it will yield its delicious product for a generation. Asparagus should not be cooked too much, twenty-five minutes being long enough. Cook it in boiling, salted water. It may be served with a cream sauce or one of drawn butter, using for the liquid the water in which it was cooked.

Dandelion and spinach have much the same value as asparagus, and our systems demand them. They are among the most digestible of our early summer vegetables, just as onions and cauliflower are among the later ones. Spinach contains iron, and is valuable in our dietary both in summer and winter, and is so easily grown that no garden should be without a plot of it. It is one of the green vegetables, not valuable so much for nutritive properties as for mixture with other foods, on account of the salt it contains and appetizing flavors.

For the most part green vegetables are better boiled. They should first be thoroughly washed to free them from earth and insects, but seldom allowed to soak in the water. When ready to cook they should be put into a saucepan of boiling water to which salt has been added. The cooking of vegetables should commence so as to finish just at the time they are needed for the table, as they lose in flavor if

kept standing for any length of time before serving. Celery has a good effect on the nervous system and cases of rheumatism. Tomatoes we are told are good for the liver. They are a healthful food if simply cooked. Just as soon as we begin to cook a tomato it begins to deteriorate, and lose its natural flavors, and an acid is developed. Uncooked tomatoes make some of our best salads, but they should never be cut until the moment they are wanted, as the juice and pulp drain away and leave only the frame work, and the flavor is never the same.

Garden peas are another thing that need to be freshly gathered and young. Cook them simply, thus retaining all the delicious, sweet flavor this vegetable has.

The onion is a useful vegetable, and considering its value it is a pity it is not more generally used, and all because nature gave it a perfume due to a volatile oil rich in sulphur. In some medical practices it is being recommended as a tonic. If it were understood that they would cook at the simmering point (180 degrees Fahrenheit) and need not boil quickly, one would not lose so much of the flavor by having it disseminated in odor throughout the house. They are an excellent food when eaten raw, and every salad is improved by a drop or two of onion juice, if nothing more It is a pity we do not find leeks oftener on our tables. They belong to the onion family, but have a more delicate flavor and are very easily grown.

Many people do not understand what is meant by "sugar corn," so they add cane sugar to it while cooking. If instead, they understood that some of the sugar and flavor goes off with every second after plucking, they would pick their peas and corn while the water was boiling. The person who lives in the country and has a garden has untold advantages over those who have to buy what has been gathered several days, and perhaps wilted, losing its first freshness. It is well to have the garden near the house, so that the person who has to gather and cook the vegetables will not feel that it is a tiring journey to procure them. If they were handy and plentiful I think more would be used in the summer and the general health of the entire family would be better. Fruit, vegetables, eggs, and milk, and its products, are the best foods for summer and not too heating either in the preparing or eating.

Vegetables have not the same condensed value and gelatine that meat has, cellulose and starch forming a large part of many of them. The ordinary food forms of starch, such as rice, arrowroot and tapioca are among the most easily digested forms of that food, but they are incapable of sustaining life. One of the most familiar of the starch foods is the potato. In boiling, the change that takes place is the breaking up and bursting of the many starch granules and the gluten is converted into a more soluble form. As we all know there is a great difference in potatoes, some are waxy and some floury. Chemistry does not very clearly define the why of this. One must just do it for themselves and cook the starch in the wisest way, not letting the waxy potato remain one minute longer in the pot when cooking than is necessary. When draining give the pot a circular motion, so that the air may get a chance to dry out the cells and thus help to make the potato more palatable. A question that is often asked is, "Should potatoes be cooked in skins or not?" I would say decidedly, cook them in the skins, for the reason that from 53 to 56 per cent. of the saline constituent is potash, and potash is an important constituent of the blood. In some countries where scurvy had been very bad before the potato was introduced, it is now not known, and medical men say it is due to a freer use of saline vegetables with other food. People who use an abundance of fruit or green salad may eat pared potatoes, but where they are the chief vegetable they should be cooked with the skins on, for the skins resist the passage of the greater part of the potash. If one notices, the skins burst only after the potatoes are cooked and the starch grains expanded.

Since the year 1845 the potato has been troubled with a disease which causes the foliage to die off suddenly and the tubers to decay. Though potatoes are rich in nutrients they contain 75 per cent. water (or 12 ounces in a pound). The potato being deficient in flesh-forming material cannot be used as a complete food, needing the addition of lean meat or some nitrogenous food such as eggs, milk, etc. In the

years when they were the chief food in Ireland they were balanced by buttermilk. If one knew the composition of the material used, I think it would be easier to cook foods better. Taking the potato as an example. It is a heat and force former, lacking nitrogen, and its composition would stand, according to A. H. Church :

	In 100 parts.	In 1 lb.
Water	75.	12.
Albuminoids	1.2	.84
Alkaloids (solanin and organic acid	1.5	.105
Starch	18.	2.385
Dextrin and pectose	2.	.14
Fat	.3	.21
Cellulose	1.	.70
Mineral matter	1.	.7

Few cooks understand why so many vegetables should be cooked in boiling, salted water; why meat should be quickly seared before roasting; why yeast, soda and cream of tartar are used to raise bread and cake batters. Sometimes one is tempted to think that the art of cooking and seasoning vegetables is a lost art, judging from the tasteless dishes one often has served up to them. It would be well if one could instil into the minds of our home keepers that no vegetable should be served so sloppy that it cannot be lifted with a fork. Some things, like tomatoes, should be thickened and made thereby more attractive. Why cannot we put a little more common sense and thought into our living, changing our diet to suit the season.

If a person is not hungry, why should he eat? Rest is often what the system needs. The warm weather has relaxed it, and a few days of rest, if not continued too long, may do good.

If one cannot eat chops, fried potatoes and griddle cakes for breakfast, try a head of lettuce and a slice of bread and butter or some fruit, or one of the non-heating cereals might be relished.

If the truth of the line telling us that "variety is the spice of life" was applied as it should be, we might have a good deal better and yet more simple living, with improved digestion.

I am not a believer in a purely vegetarian diet. There are times when meat, and meat only, will fill the craving of one's nature, but it is not with the thermometer at 90 degrees Fahrenheit in the shade. A mid-day meal of good bread and butter and a well-cooked potato, or corn, tomatoes and some fresh fruit, would be more likely to furnish and at the same time cool one's blood, enabling him to think clearly and work with renewed pleasure. For let us remember where Jehovah said to the first man, "Thou shalt eat the herb of the field."

THE COOKING AND SERVING OF VEGETABLES.

By Mrs. James Armstrong, Gorrie.

Good cooking is to make the food palatable and pleasing to the eye. To know just how long to cook the article, the exact amount of seasoning to use, and the proper way to garnish and serve it. Cooking is not the degrading occupation some people regard it, fit only for those who cannot do anything else. It is a science not difficult to comprehend, but one that requires interest, attention and judgment; a science that has claimed the devotion of wise and learned men and women. The kitchen has been called the "Laboratory of a Household," wherein are concocted all those comfortable dishes that pertain to the health of a family.

Ruskin says, "Cooking means much tasting and no wasting." How many times suitable food is provided for a family, food which would nourish and strengthen the worn-out tissues, but it is utterly spoiled in the cooking. Vegetables, as well as every other kind of food, should be cooked just long enough and no longer. Over-cooking

is as bad as under-cooking. A good cook studies the fire she is to cook with. She makes an intelligent use of the proper utensils, does not boil vegetables in a cake pan nor attempt to fry in a roaster. A good cook does not put off until the last minute her preparations for the meals, but has everything ready to begin on time, giving each article its full time and right amount of heat, neither having the stove red hot nor putting the saucepan on the coals; her food never burns, never is under-done, but is always just right, because she is careful, watchful and thinks of what she is doing.

Aside from their value as a food, nearly all vegetables possess curative properties of a very high order, and will many times do more towards aiding nature in overcoming disease and toning the system than many drugs. This is particularly the case with children whose recuperative powers are great. Housekeepers should therefore begin by serving the table daily with the first spring vegetables and continue throughout the season. Many families use meat to the exclusion of other diet, which is by no means wholesome to say nothing of the expense. A taste for vegetables can be cultivated in children very early, and mothers of families should see that such as are liked by their children are served with daintiness and variety so as to tempt the appetite and render vegetables a necessity upon the table. The daily diet may be so varied as to have some vegetable of medicinal quality served throughout the season, so as to keep the family in good health. If called upon to decide the most important item in cooking vegetables, in order to have them palatable, I would say the proper seasoning is by far the most necessary detail of this branch. Of course the tastes of people differ as to seasoning, but a perfect blending of the various flavors suited to each dish rarely fails to be acceptable. Good seasoning of vegetables as well as of all food consists in knowing exactly how to produce the result.

In regard to the various utensils used to cook vegetables, I prefer the granite ware. If you use salt in cooking vegetables in the iron pots you will darken them, that is, such vegetables as corn, etc. A great deal is in how the vegetables are sent to the table. Never send them to the table in cold dishes. Always have the dishes perfectly clean and if possible free from cracks and unsightly marks. It pays to take time to arrange the vegetables nicely, as what looks nice is, I think, much more appetizing.

Potatoes are said to be valuable on account of their easiness of digestion and nourishing qualities. The different ways to cook potatoes are innumerable. Old potatoes are better if let stand in very cold water for ten minutes after peeling, it makes them firm. New potatoes should always be put in boiling water to cook and if possible do not let them stand around after peeling them.

The value of the sweet potato as an article of food has long been well known, but it was during the war between the Northern and Southern States, when luxuries of all kinds for the table were wholly unattainable, and even necessaries were scarce, that the Southern housekeepers learned for the first time its possibilities as a vegetable. Tomatoes are very wholesome, and are one of the best-liked summer vegetables and like potatoes there are a number of ways of cooking and serving them.

Onions are possibly the most healthful vegetable which is eaten at the table. They tone the system and invigorate the digestive organs. Cauliflower is recommended for people of sedentary habits. Asparagus is a good blood purifier and is used by the French in treating rheumatism. In boiling cabbage some people make a great mistake by boiling it too long. It should have a fresh taste when cooked and not too soft and soaked with water when served. A great many say they cannot eat cabbage, it does not agree with them. I think one reason is that they cook it too long. There is no tastier vegetable if properly cooked and served. Among the early spring vegetables few are more desirable than spinach, not particularly for its excellence as an article of food, but also for its medicinal qualities. It is considered to be a purifier of the blood, is one of our best early vegetables and can be served in a variety of ways. Celery is very quieting to the nervous system and very beneficial to sufferers from neuralgia and rheumatism. The most common way is to serve the stalks cold

(after they have been thoroughly washed). Lettuce is a sedative, besides being cooling to the system. It is of course best as a salad, but it may be dressed with ham gravy, hard-boiled eggs, or fried and seasoned with salt, butter and pepper.

The proper accompaniments for different kinds of meats are as follows: Roast and tomato or mushroom sauce; roast mutton, hare, venison and various kinds of beef should be served with grated horse-radish; roast pork and apple sauce; roast veal game, red currant jelly; boiled mutton and caper sauce; boiled chicken and bread sauce; roast lamb and mint sauce; roast turkey and cranberry sauce; boiled turkey and oyster sauce; boiled fresh mackerel and gooseberry sauce; boiled shad, boiled rice and salad; roast pigeon and mushroom sauce; fresh salmon, green peas and cream sauce; roast goose and apple sauce.

CANNING FRUIT.

By Mrs. S. A. Lount, Walkerton.

I really do not think, ladies, that I can tell anything about canning fruit that you do not already know, but perhaps I can say something about the keeping of fruit which some of you may not have thought about, and if we each give our experience or ideas on some subject relating to Domestic Science and discuss it we will not only have a "Women's Institute," but we will have a "Mutual Improvement Society" as well, for I am sure we can each learn something from the other.

Fruits are much more easily canned than vegetables. There are continually floating about in the air a great variety of wild yeast plants or microbes, and if a single one of those little germs alight on the underside of the lids or on the edge of the jar before the lid is sealed down, it is quite sufficient to cause fermentation in the jar of corn, peas or anything containing sugar. For this reason fruits canned with sugar are more liable to ferment than those canned without.

I think the great secret of canning fruit and vegetables, to have them keep well, is to have the jars perfectly free from those little germs. To be successful in canning it is necessary to sterilize or sufficiently heat the jars to kill anything that may fall from the air into them.

In canning strawberries and raspberries, I just scald as many jars as I will require. I also throw the lids and the rubbers into cold water and let them come to the boiling point, then set them to one side until I am ready to use them, then I fill my jars just as full as they will hold with the uncooked fruit and shake them down, but not enough to mash them, and fill up again. I then put the lids on, without the rubbers, and set them in bread pans that are partly filled with water and put in the oven, which is not too hot at first, but after they are in a short time I make the oven pretty hot for there is then no danger of breaking. While they are heating I make my syrup. I allow one cup of sugar to every quart jar of fruit (berries) and I add enough water to make a good syrup. It will take a good cup of water to a cup of sugar. As soon as the juice comes about half way to the top of the berries and they are well heated, I take the jars out and fill them to overflowing with the hot syrup; put the rubbers on, seal up and turn upside down on the table. If there is a drop of juice runs out they are not air tight and I take the lids off, put more syrup in and seal over again.

I pit cherries, then weigh and add half a pound of sugar to one pound of cherries. Stir the sugar through them pretty well, and let them stand over night. The next morning I let them boil up once only and then put into hot jars, seal up and turn upside down on the table. If canned fruit is cooked much it destroys the natural flavor of the fruit and it will not be as nice a color.

I pick plums with a fork, to prevent the skins from cracking and coming off. I make a syrup of half a pound of sugar to one pound of plums and I only put in a few at a time. As soon as they are tender I skim them out on a platter and put more

in. When I have them all cooked I put them all back in the syrup and let them boil up once, then put into hot jars and seal.

Peaches and pears I do the same as plums, only, of course, I peel them and put them into cold water to prevent them from turning dark.

Black and red currants I always preserve pound for pound. I put water enough on the black currants to show up through them and I boil till soft, then I add the sugar and boil half an hour longer. I only put a little water on red currants because they have so much juice of their own, but I cook them for about half an hour before adding the sugar, then boil another half hour. Currants done in this way will be in a jelly when cold.

I have been fairly successful in canning tomatoes and corn, but other vegetables I know nothing about. Corn must be freshly gathered and cut from the cob as soon as possible and packed into jars. A little mallet, something like a small potato masher, is a good thing to pack it with. I put the tops on loosely and stand the jars in a boiler with enough cold water to come more than half way to the top of the jars. Bring it to the boiling point and boil for four hours. There should be something put on the bottom of the boiler to protect the jars.

Tomatoes I scald to remove the skin. If they are too large to go into the jars I cut them in two, but I like them in just as large pieces as I can get in the jars. I put them in a granite kettle with a little salt and let them come to a boil, and then seal them in jars.

The particular part in canning vegetables is to have the jars, lids and rubbers well scalded in boiling water, for it is those little wild yeast plants or microbes which are the cause of all fermentation.

DISCUSSION.

Q. What temperature would you recommend for the fruit to be heated in canning?

A. Mrs. Colin Campbell, Goderich: 170 degrees Fahrenheit.

Q. Why do you prefer a porcelain-lined or enamelled kettle ?

A. If a copper or brass kettle is used the contents are more or less imbued with verdigris produced on them by the action of the acids.

Q. What quantity of sugar should be used in proportion to fruit when preserving?

A. To every pound of fruit allow three-quarters of a pound of sugar.

Q. Would you add any water ?

A. To any quantity of fruit over three pounds put half a pint of water in preserving pan.

Q. What causes preserved fruit to ferment ?

A. Fruit gathered in damp or wet weather will often cause the jam to ferment, or jam made from over-ripe fruit never keeps well.

Q. When should fruit be gathered ?

A. In dry weather.

Q. How long should fruit for jam be cooked ?

A. Small fruits should be cooked slowly forty minutes, large fruits until you can pierce them with a straw.

Q. How do you can tomatoes ?

A. I scald the tomatoes and remove the skins; put them in a porcelain-lined kettle, bring them slowly to a boil and simmer thirty minutes. Put the tomatoes boiling hot into the jars and seal.

Q. Which are best kind of pears for canning ?

A. Bartletts.

Q. What are the proper proportions to can apples and quinces ?

A. To every four pounds of apples allow one pound of quinces.

Q. How do you dry peaches ?

A. I spread them in a single layer on boards and stand in the hot sun to dry gradually until they turn leather color; bringing in always before sunset.

Q. Would you recommend drying fruit in the oven ?

A. All fruit may be dried in the oven provided the oven is not sufficiently hot to scorch or scald the fruits. This is an excellent way as the fruit is dried more quickly and you escape the danger of its being stung by insects.

Q. Where should dried fruit be kept ?

A. When dry put into paper sacks and hang in a dark, dry, cool place.

Q. What about paring peaches ?

A. It is best not to pare them, but the fur should be thoroughly rubbed.

Q. How do you keep fruit from spoiling ?

A. Miss Laura Rose, Guelph: Have the fruit well cooked, the jars thoroughly washed and sterilized by boiling them in water or baking them in the oven, and use good new rubber bands.

CANNING OF VEGETABLES.

By Mrs. T. F. Saunders, Wroxeter.

Although the present method of preserving fruit by excluding air from the vessel in which it is kept, is comparatively new to modern housekeepers, it is by no means a new art, as antiquarians, in their researches among ancient ruins have proved that fruit was preserved in similar manner by housewives thousands of years ago. In these days of cheap canned goods, a great many persons consider it unwise to can their own vegetables, while many prefer doing so, feeling that anything kept for a length of time in tin vessels is very unhealthful, and I must say I belong to the latter class.

The canning of vegetables is similar to the canning of fruit. One should bear in mind that the exclusion of air, and the having of everything used thoroughly sterilized, is one thing needful to complete success. Although, properly speaking, tomatoes should be classed as fruit, they are generally considered as a vegetable, and used as such. Probably I have had more experience in canning tomatoes than any other vegetable. I have heard many complaints from ladies of their canned tomatoes spoiling, but, although I have canned large quantities almost every year for a number of years, I rarely lose a jar. In the first place, you want your tomatoes perfectly ripe and of good quality. I find that a very acid tomato is much harder to keep than a sweeter variety. First, have your jars and tops thoroughly cleaned and placed in boiling water. Then pour boiling water over the tomatoes to loosen the skins. Remove these, cut the tomatoes in halves and if there is any hard, green core, be sure to cut it out. Put the fruit in a preserving kettle, heat slowly to the boiling point and boil ten minutes, fill your jars to overflowing and quickly screw on the tops, turn them upside down to see if they are air-tight. I cannot see why they should not keep any length of time. I have kept them three years perfectly.

Tomatoes may also be canned by filling the jars with the prepared fruit, either cut or whole, screwing the top and setting them in a steamer or boiler and cooking for an hour. They will shrink some. Take one jar and fill up the rest, put on rubbers and screw down tightly.

String beans may be boiled until tender, filled into jars, fastened down tightly and boiled two hours, or cooked until tender, filled to overflowing into hot jars (using as little of the water in which they were cooked as possible) screwed down tightly and cooled. Peas may be canned in the same way as beans.

Rhubarb may be canned by removing the skin, cutting into short lengths, packing as closely as possible in jars and filling the jars to overflowing with pure, cold water. No cooking is required for the preservation of this plant. Of course the jars must be perfectly air tight.

VEGETABLES.

By Mrs. F. V. E. Dickson, Wroxeter.

We are all apt to fall into conventional ways, which frequently are more or less correct, not because we know they are right, but because other people do so, thus we really spend our lives in copying those whom we consider a little in advance of curselves in the ways of the world.

Potatoes have little or no flavor and are more easily eaten than many other vegetables and take less care in the preparation than many others, so we find in most families that they are served every day. They are valuable as bulk food and especially so when eaten with meat.

All dishes should be made to please the eye, if possible, and strange as it may seem in nine cases out of ten, what pleases the eye pleases the stomach. There seems to be an almost unwritten law that certain things are right to serve together. The following rules may be applied to the cooking of most vegetables. Have them as fresh as possible; stale and withered ones are unwholesome and unpalatable; summer vegetables should be cooked on the same day they are gathered, if possible. Pick them over and wash well, cutting out all decayed or unripe parts. Lay them, when peeled, in cold water for some time before cooking. If you boil them put a little salt in the water. Cook them steadily after you put them on. Be sure they are thoroughly done. Drain well and serve hot.

In winter, vegetables such as beets, carrots and turnips are much improved by being laid in cold water over night before cooking, as it makes them fresher and crisper.

In cooking green beans, I have found that they were very much better when cooked slowly for two hours, than when cooked in the old way of quick boiling for half an hour. All the summer roots are much better used while small.

With chops, serve mashed or creamed potatoes, with a salad of lettuce or tomato. For a roast beef dinner, the green vegetables may be cauliflower, cabbage or green beans, for boiled beef, turnips or carrots and plain boiled potatoes with a lettuce salad or celery. With boiled mutton always serve caper sauce, boiled rice and stewed turnips; with lamb, mint sauce and peas. With pork, beans, apple sauce and turnips may be served.

Serve one starchy vegetable and one green vegetable with hot meat. With poultry and roast mutton, some tart jelly ought to be served and many people now use rich jam or preserves with their meat.

ROAST FOWL.

By Mrs. W. J. Hunter, Brampton.

At this time, when on nearly every table in the land fowl is served more or less during the winter months, I fancy nearly every housekeeper thinks she knows the best and most tasty way of serving them. Therefore, in giving this article, I do not by any means wish to dispute the claims of other housewives. I thought if we might present one way of doing them, it would bring discussion and we would all learn something, and perhaps save our fowl in such a way this winter that the family might pronounce them the best yet.

First, in choosing a bird to roast, be sure it is a young one. The woman who raises her own birds has no difficulty. But, alas, all the birds slain are not in their infancy, and it may be that after spending some little time preparing one to the best of our ability, when it is brought to the table the matter of dissection is as difficult as it is trying to the temper of the carver. In purchasing fowl two rules generally hold good. In selecting a turkey or chicken pierce the skin with a needle or pin and in a young bird it will pull out without raising the skin. If the bird is an old one

the skin will adhere to the needle and be raised up with it. In geese or ducks there are two bones that rise up toward each other on the under side at the tail. If these are bent with finger and thumb they will snap off in a young fowl, but will bend in an old one. Singe carefully. A piece of white paper will answer. Pull out any odd pin feathers that may have been overlooked, and sever legs at middle joint. With a sharp knife slit skin down back of neck and cut neck off close to body; remove windpipe and loosen crop all around, taking care not to break it. Now, make opening to remove entrails. In chickens or turkeys cut open between the breast and leg in hollow of thigh; in geese and ducks cut crosswise on breast side a little in front of tail. Insert hand and loosen all around inside, then grasp the gizzard and draw gently. Be sure not to break the gall bag as by so doing you will give the whole fowl a bitter flavor. Remove light red substance between ribs, but leave the sole, that is the dark flesh on inside of backbone. Wash well in lukewarm water and wipe quite dry with a clean cloth. We do not advocate sprinkling salt inside, as it tends to draw the juice. Lay on table, breast side up, and press hard to break breast bone; push lower part of leg up into skin of second joint.

Now prepare the dressing. For goose and duck almost the same dressing will do. Perhaps a little more onion in goose dressing would be better. Prepare as follows: — Chop onions to about one-third the bulk required, par-boil in water and drain well; add stale bread crumbs, salt, pepper, pinch of sugar, small piece of butter and sage to taste. Some people like a dressing of mashed potatoes. For chicken dressing prepare bread crumbs, liberal piece of butter, salt, pepper, little sugar, very little good mace and celery salt, an egg to bind it slightly and summer savory to suit the taste. Turkey may be filled with this or one-third sausage meat or raw oysters cut up. In stuffing turkey and chicken make a ball of the dressing and insert in crop to plump it out. In goose and duck put it all inside and pull skin of neck back tightly behind. Close openings, push legs up into skin at the side and skewer together. In white fowl turn tips of wings back; in goose and duck cut wings at middle joints and serve tips with giblets. Be sure to skewer and tie the fowl well so that it will be in nice shape when cooked. Have oven pretty hot just at first, then cook slowly. A covered baking pan is the best, but if an open one is used be sure to baste the fowl often. Use a little butter and nice dripping to baste chicken, and water, salted slightly, for goose. Dredge flour on top before putting fowl in the oven.

For gravys (after fowl is lifted) set pan on top of stove, put in large cooking spoon of flour, stir until brown, then add water until of proper consistency. For turkey and chicken gravy thin with milk instead of water and season with a little mace, celery, salt, pepper and sugar. Put a dash of sage in goose gravy, and if desired boil liver and chop fine and add to it. Parboil giblets (neck, heart, gizzard, liver and wing tips) and put in pan to brown about fifteen minutes before lifting fowl.

With chicken serve bread sauce. With goose serve apple sauce; with duck, apple sauce or currant jelly, and with roast turkey, cranberries made into sauce, or better still put in a mould and turn out cold.

Have plates real hot and a good sharp knife for the carver, and I think you will furnish a meat to the king's taste.

DISCUSSION.

Q. Is fish a brain food ?

A. Miss Blanche Maddock, Guelph: The prevalent idea that fish is a brain food is a mistaken one. The reason that fish is usually recommended for students and others engaged in work requiring brain power is because it contains the elements necessary to keep the whole system in repair and in sufficient quantities for the exertion made, but not in such large quantities as to clog and tire the brain, which meats are apt to do. It thus leaves the brain free to think and act.

Q. Would you put meat on in boiling water or cold ?

A. The meat should be put in boiling water for a short time until the albumen (of which the lean meat is largely composed) is hardened or coagulated. This forms

a strong coating around the outside of the meat and prevents the juices from escaping. When this coating has been formed remove the meat to a place on the stove where it will cook at a temperature just below boiling point. By this method the juices are kept in soluble form and the lean of the meat is made tender and digestible.

Q. Why is pastry injurious ?

A. When food containing flour is taken into the mouth the starch in the flour should be thoroughly mixed with the saliva before entering the stomach, but in pastry the starch cells are sealed over with fat so that they cannot become broken up in the mouth, and therefore have to go into the stomach in that condition. Thus the work that should be done in the mouth has to be done in the stomach and intestines.

Q. If rice contains very little bone-forming food how is it that some nations live almost exclusively on that food ?

A. In the countries where rice is used as the staple article of diet the temperature of the climate is so high that the people make very little physical exertion. Therefore the waste or drain on the system is very slight. Rice and the other foods used are made up largely of starch and sugar, these giving sufficient nourishment for the exertion required. The small amount of bone-forming food contained in them is quite sufficient to keep the body in repair.

Q. Why does it injure tea to boil it ?

A. There is a certain property in tea known as tannin, which is injurious. When the tea is boiled this is drawn out into the water.

Q. Why are eggs, which are cooked at a low temperature, better than those cooked in boiling water ?

A. When eggs are cooked in boiling water the albumen or white of the egg becomes tough and leathery, and consequently is more difficult to digest than when the albumen is coagulated in a soft, jelly-like form.

Q. Does it improve a cake to beat the yolks as well as the whites of the eggs ?

A. Yes, the object in beating the egg is to get the air into it. The more air in the egg the lighter the cake will be.

Q. Is it well to feed growing children meats underdone ?

A. Pork should never be fed to any one underdone. There are very often disease germs in pork which are only destroyed after thorough cooking. White meats should always be thoroughly cooked. Under some circumstances, where the child is run down in health or anaemic, rare beef is beneficial, but generally speaking it is best to cook all red meats sufficiently to change the red color, but not enough to harden or coagulate the juice.

Q. Is it injurious to use sugar with porridge ?

A. Sugar with oatmeal porridge is apt to form an acid in the stomach, thus causing heart-burn.

Q. Is crushed wheat as good a breakfast food as oatmeal ?

A. In the winter time oatmeal makes a better breakfast food as it is stronger and is more heating than wheat. It is well at any season of the year to use different cereals, as a variety of food is very necessary.

Q. Are fruits of any particular food value ?

A. Fruits are beneficial not so much for the actual food elements which they contain as for the acid (of which they are largely composed), which assist in the digestion of other foods. Fruits also assist in keeping the blood pure and the system in order.

Q. Why are vegetables so beneficial when they are made up largely of water ?

A. As the body is about three-fifths water it is necessary to take sufficient to keep the system in running order. All the elements in our foods which go to build up and nourish the body are carried to the different parts by means of water. After repeated experiments it is found that water taken in vegetables (while it has the same chemical elements) has a more beneficial effect than when taken separately.

Q. Are potatoes more nourishing when cooked in the skins ?

A. Yes, because the mineral part of the potato, also most of the starch, are found next the skin. The nearer we go to the centre of the potato the farther apart are the starch cells.

Q. Are potatoes hard to digest ?

A. No, the starch cells are dissolved by the saliva in the mouth before they reach the stomach or intestines.

Q. Is it advisable to use for cooking purposes the water in which potatoes have been boiled ?

A. Miss Agnes Smith, Hamilton. Potatoes are said to contain a poison which is dissolved by the cooking, so it is better not to use the water.

Q. How would you cook cereals ?

A. Allow them to boil and then cook slowly for a long time, so that the woody fibre may be softened.

Q. What are the uses of a double boiler ?

A. 1st. To cook milk mixtures. There is not the same danger of burning the food. 2nd, For custards; the albumen of the egg is not so easily coagulated, and curdling is not so apt to occur. 3rd, For the cooking of cereals.

Q. What is the best method of cooking tough steak?

A. Put the meat on in cold water and let it come to boiling point. Then set it back and allow it to simmer until tender.

Q. In cooking meat in a double roast pan is it advisable to cover it when first putting it in the oven ?

A. Allow it to brown before covering.

Q. In baking a custard what means should be taken to keep it at the proper temperature ?

A. The baking dish containing custard should be set in a pan of hot water.

THE FLOWER AND VEGETABLE GARDENS.

CULTURE OF FLOWERS.

By Mrs. A. R. Orser, Stella.

When asked to contribute a paper on the "Culture of Flowers," I felt that it would be difficult for me to do so as my knowledge of the subject is limited; but having promised to do what I could, I feel that I ought to at least make an effort to do so. I have written only of those I have been successful in growing. Plants of more difficult culture, I have left for persons better competent to give them the treatment they require.

Requirements of Plants. Flowers, like people, have their likes and dislikes, and if we would be successful in growing any one variety, we should acquaint ourselves with its habits, and so far as we can, meet its requirements. Some like partial shade, others like a full southern exposure the entire day, others prefer the morning sun only, while others like best entire shade. Some require a great deal of water ; others not so much, and others very little indeed. Nearly all require good drainage, and the kind of soil they will thrive in best.

Geraniums. If I could have but one plant, I would choose the geranium, for the reason that it is easy of culture. Its requirements are, good soil, suitable drainage, sufficient water only when needed and a southern exposure. If given these, any one can be successful in cultivating geraniums.

Begonias. The begonia, too, is a popular house plant, and requires no more attention than can be easily given. They never do well in a window where they get the sunshine, so should be grown in a window with an eastern exposure. They delight

in a moist atmosphere, and a soil of leaf mould, loam and sand. They are seldom attacked by insects, but sometimes are by the mealy bug, which is easily routed by the application of an emulsion of fir tree oil and kerosene.

Fuchsias. The fuchsia is one of the best summer-blooming plants. It begins to blossom early in the season and will continue until late in the fall. It should have a soil of leaf mould mixed with sand. The pots should be well drained, as stagnant water at the roots will injure the plants. If soil and drainage are what they should be, too much water is scarcely possible. As soon as it becomes root-bound, it should be removed to a larger pot. The morning sun is best,, but it may be placed with perfect confidence in a window with a northern exposure. If attacked by the mealy bug or aphis, the fir tree emulsion used according to the directions given, will entirely rout them out. Tobacco tea is often used in fighting the green aphis. Make the tea about the color of tea to be used on the table. Plants should be dipped in this tea and allowed to remain about five minutes.

To Kill Root Worms. Plants are often injured by little white worms in the soil. To destroy them, take a piece of perfectly fresh lime as large as an ordinary-sized tea cup and put in a pail of water, let it dissolve, and pour off the clean water, apply enough to the soil to thoroughly saturate it.

I use as a fertilizer liquid ammonia, one tablespoonful to about three quarts of water. Water the plants thoroughly with this once a week for a period of six weeks, spring and fall, when a marked improvement will be seen in the growth and color of the foliage and in the abundance of bloom.

In conclusion, let me say, if we, who have plants, find them a delight and blessing, which I can say they are to me, let us not be niggardly with them. 'Tis true, one cannot always slip a plant, for there are times when to do so would annihilate it, but when we have one to spare, let us give it to one who has not, and our prunings, instead of throwing them away, let us pass them on that they may be to others what they have been to us, a joy and a blessing.

PLANTS AND THEIR GROWTH.

By Mrs. G. W. Knowlson, Gorrie, Ont.

Some think that all plants require the same care. This is a mistake. The six principal points to be remembered are heat, sunlight, watering, air, drainage and good soil. The following plants require a temperature of 70 to 80 degrees in the day time and 55 to 60 at night, viz.: begonias, ferns, coleus, calceolarias, cacti, palms and geraniums The following will do well in an atmosphere ranging from 50 to 60 degrees by day and 40 to 45 degrees by night.—Oleanders, roses, carnations, callas, primroses, violets, verbenas and chrysanthemums. Plants require rest at night and a slightly lower temperature assists materially in this respect. Over-anxiety to keep out the frost at night is often the cause of a higher temperature being maintained at night than in the day time. This is injurious to plant life, as it induces a weak, spindly growth that invites disease as well as a beautiful crop of insect pests.

I have found from experience that callas will not bloom unless given at least three months' rest. By resting I mean to be without water and to allow the leaves and stalks to die down completely to the bulb. When you wish to replant again shake off all the old soil from the bulb and repot in fine rich soil, using a pot one size larger than the one used the previous year. When growing, water freely and give plenty of sunlight and fresh air.

Geranium slips if planted in February and properly treated, will bloom in June, or if planted in August will bloom in January.

When planting slips, put the plants in the earth before watering, and use small pots. Give warm water in the winter also plenty of sunlight. Water all newly-potted plants once thoroughly and withhold water until the soil shows signs of becom-

ing dry again. Too much water given to newly potted plants before root action has well started will often destroy them.

I have found by experience that a mixture of equal parts of decayed sods and rotten stable manure is the best kind of soil for plants. The sods for this purpose may be obtained along the roadside. Lay down a course of sods and on top of this an equal course of well-rotted manure and so on alternately until the heap is finished, the last layer being sod. This heap should be turned over carefully two or three times a year, breaking up the sods finely with a spade or fork.

I think broken brick to be the best to use for drainage.

ROSE CULTURE.

By Miss A. Hampton, Millbrook.

Roses may be divided into two classes, climbing and bush roses. The climbing roses include Sweet Briar, Hybrid Briar, Noisette, Baltimore Bell, Prairie Queen and Rambler. The bush variety are divided into numerous families of June roses, Damask, Provence, Moss, Japan, China, Bourbon, Tea, Polyanthus, Hybrid Perpetual and Hybrid Tea.

The Moss Rose is one of the most hardy and popular but its growth at first is very slow. The Rambler, Hybrid, Perpetual and Hybrid Tea are the most tender, and require to be sheltered from north winds. The Ramblers are adapted for walls or festooning over the end of piazzas. They are not perpetual bloomers, but their flowering season lasts a long time. Their growth is remarkably rapid and their foliage particularly fine.

All roses require very rich soil, pure air and sunshine. The old wood should be kept trimmed out. It is the young growth that produces the flowers. In the fall trim and transplant the house roses. Keep the garden roses free from sod at the roots, as the sod prevents the young shoots from coming up. In the fall lay the bushes down and cover with boards. Some cover with straw, but straw attracts mice. Cow manure is the best fertilizer. Hen manure is too strong, and in using it you are likely to kill or injure the bushes. The best plan is to put the manure into a bucket, pour water on it, stir and pour round the bushes. Once or twice a season is sufficient. Soot applied in the same way is good, it darkens the bloom.

Among the rose pests are the red spider, the bark louse, green fly and mildew. For house roses, one of the best remedies is tobacco smoke. Cover the plant with a paper cone, and get one who smokes to blow a few whiffs from a cigar into the cone. This will kill the bark louse and green fly. Also bathe them occasionally with soap suds, as it will keep the grubs from the roots. If plants are exposed to draughts they will mildew. For mildew scatter sulphur on the soil. The red spider is fond of other plants as well as roses, and often does irreparable damage. The best preventive is cold water baths.

For garden roses the best insecticide is Paris green. Do not make it too strong. One teaspoonful is sufficient to a pail of water. Keep your plants in a healthy condition As a man full of vitality and strength will escape many of the natural diseases flesh is heir to, so healthy plants will in a great measure escape their enemies.

For winter bloom, let the plants rest by keeping in a dark place during the summer. Water just enough to keep alive. In the fall trim and transplant.

THE PALM.

By Miss Needham, Millbrook.

The date-palm is common in the east, especially Palestine, where it grows to the height of 70 feet. It does not bear dates until 8 years old, and then continues to bear for about 100 years. There, dates take the place of bread to a large extent, and its wood is used for many purposes. In the west the plam is prized as a house-plant (not growing very high) for its graceful branches and being an emblem of joy. There are

many varieties, some of the favorites being cocos, latania, ostrich-feather and kentia.

To grow this plant successfully the most suitable soil is half sandy loam and half well-rotted manure. It requires a deep pot (on account of the shape of its roots) rather than a large one, and should not be transplanted unless the present one is full of healthy roots Do not neglect the drainage which should be finely broken crockery in the bottom of the pot to a depth of about one inch, or better still use charcoal as it keeps the soil sweet and will add color to the foliage and flower of any plant. If the tips of the branches become brown the cause is either imperfect drainage, too much heat, furnace gas, want of water, or keeping in too much shade, though palms do not require the sun. Once in two or three weeks they should be soaked until every root is reached. The branches should be sponged or sprayed about once a week, using milk and water. Sponging with a little castor oil is good to give a gloss to its branches. By washing thoroughly occasionally with soapy water there will be no trouble with scaly bug. A very small quantity of sulphur mixed with the soil will keep grubs from the roots.

WINTER WINDOW GARDENING.

By Mrs. W. J. Arnott, Churchville.

Winter window gardening, like a great many other things, has made rapid progress during the last thirty-five or forty years. In former days about the only plants seen in windows were a few stalky geraniums and small chrysanthemums. Plants were then both scarce and expensive. Now there are very few houses without their window plants, some of which would compare very favorably with those grown in green houses, and flowers are so much used on nearly all occasions that they seem almost a necessity.

A few years ago in one of the large manufacturing towns in England a good prize was given for the best cottage window-garden, and it was thought in this way to stimulate the people to take a greater interest in keeping their homes neat and tidy. To have a successful window garden, you need to commence in spring by putting bulbous plants to rest, taking cuttings from geraniums and sowing seeds of annuals. Calla lilies are amongst the best winter bloomers, if properly cared for. Give them a rest during July and August, then repot in good rich soil, give plenty of drainage, keep in a cool place until October, then place in a warm, sunny window, give an abundance of water and each lily should bloom about every five or six weeks until the following July.

Cuttings taken from geraniums in spring will bloom earlier in winter than those taken in July or August, but the spring plants will grow very large and take up more room. Annuals such as mignonette, nasturtiums and others bloom better in winter by sowing the seed in small pots in spring, keeping them well pinched back during summer, so they will have strong, woody stalks, then put in larger pots for winter blooming. Last winter I had a plant of tall nasturtiums from which I must have cut dozens of blossoms, almost as pretty as those of summer. Smilax is a pretty delicate-looking vine for the window and is easily grown. Primulas are constant bloomers, the white being very pretty. Heliotrope will also bloom all winter. Tuberoses are pretty for November. Pot the bulbs in May, sink in the ground during summer, and bring in before frost comes, and they will fill the house with fragrance. Chrysanthemums are also fine for November, but are hard to keep free from insects, so it is better to not mix them with the other plants, for if insects get a start in the fall it will be hard to get rid of them. Freesias are a pretty white fragrant flower grown from small bulbs. Put in rich earth near the last of August, keep in the dark for two weeks, place in a cool, sunny window and they should bloom in February. The flowers keep a long time after being cut. Bulbs of nearly all kinds need to be kept in the dark for several weeks to grow strong roots.

Pot all plants in good rich soil in the fall, giving plenty of drainage and they will need little more until spring. We use a soil composed of about one pail of leaf mould, one of clay loam, one of well rotted manure and half a pail of sand, well mixed and sifted, the coarser parts being used for second drainage above the broken pots or charcoal. Do not fill the pots too full. A little liquid manure or soot in the water given occasionally keeps the leaves fresh and green. Give plenty of fresh air and water freely with luke-warm water. I do not say these are the best ways of treating plants, but they are the ways from which we have had the best results. The cultivation of flowers is very interesting. They are God's gifts and speak to us of rest and peace.

DISCUSSION.

Q. How do you care for house plants ?

A. Miss Laura Rose, Guleph. The different varieties need different treatment, so to be successful one must study the characteristics and wants of each. Generally speaking, the average woman keeps too many plants. Cull out the poor ones and give the few more space and care. One really pretty plant is more admired than a dozen spindly, sickly ones. Prof. Hutt says more plants are killed by over-watering than anything else. Give them a good drink when the soil tells you they need it. Keep the leaves free of dust for it is through them the plants breathe.

THE VEGETABLE GARDEN.

By Miss Ruth Pirie, Winterbourne.

Location. The garden is frequently under the care of the women and in such cases should be near the house, to be in reach for gathering and for fifteen-minute opportunities for gardening. All heavy crops such as potatoes, melons, squash and cabbage should be put in the field where they can be cultivated with horse and plough.

Cultivation. A light, sandy loam is usually preferred, but fine vegetables are grown, with ordinary care, in heavy, dark soils. A mellow rich soil which will hold moisture is easily recognized and should be chosen if available. The size of the garden should depend on the size of the family and their taste for vegetables. The garden should be dug or plowed in the fall, and the clods left exposed to the frost, which is nature's most effective agent in opening up the soil, and putting it in order for plant growth. The manure should be put on in the fall and is best when thoroughly rotted. In the spring, the soil should be broken fine as deep as the plants roots are expected to go, this being from fifteen to twenty inches. Thus the earth is left fine, loose and mellow for the tender roots. The earth, thus prepared, holds moisture and readily supplies the roots with food. To determine the proper condition of the soil in spring squeeze a little of it in the hand, if it makes a ball and sticks to the hand, it is too wet, if it breaks hard it is too dry. To work easily it should crumble easily and leave very little dirt on the hands.

Use Good Seed. The seeds should be ready by the time the ground is prepared. It has been proven that large seeds produce strongr plants than the small, light seeds. It is a mistake to plant old seed, and it is also well to procure a supply from a different part of the country, but not very remote nor from too different a climate.

Investigation has shown that beans, peas and other vegetables collect nitrogen from the air and leave it in the ground. Thus these plants may be followed by others that especially need nitrogen. Lettuce may be succeeded by beans and tomatoes; beans by radish or celery, beets by spinach or lettuce and onions by peas or cucumbers.

How and When to Plant. Beans should be planted when the weather and ground are warm, the seed planted with the eyes downward. The lima is a good kind. Poles should be provided for the vines.

Beets. Soak the seed in warm water for a day before planting and cover an inch deep for early use. We sow as soon as the ground can be worked. Sow in June for winter use.

Radishes require a loose, sandy soil. Ashes spread on the ground before planting will protect the roots from grubs.

Cucumber seed is sown when the ground is dry and warm (about the 5th of June) in hills four feet apart, mixing the soil with a little rotten manure and ashes. Place from ten to twelve seeds in each hill and cover half an inch deep, thin to three or four in a hill when they begin to run. To prevent the striped bug, nail four pieces of board together and cover with mosquito netting, placing one over each hill.

Melons should have a warm, light soil and plenty of manure and the seed should be sown in hills six feet apart. Citrons should be put in hills nine feet apart.

Parsnips should have a rich soil. Sow seed thick, in drills, half an inch deep. In the fall take up enough for winter use and store in the cellar, and leave the remainder in the ground until spring. Cover the tops with a little earth when the frost comes.

Tomatoes for early crops should be set in dry, gravelly soil. If a large and rather late crop is desired, set in rich, moist soil. If some of the branches are clipped off, leaving only the strongest and thickest, it will increase the earliness of the tomato. The plants should be supported by a hoop or ladder trellis or small stakes driven into the ground and the plant attached to them by soft twine.

Cabbage seed should be sown in the house in March or April and planted when the ground is warm. When the heads begin to form, throw a handful of salt in each cabbage. Persian insect powder is good to use for the worms. It may be applied with a bellows while the dew is on the plants. A German remedy is a mixture of buckwheat flour and black pepper, also applied in the early morning.

Currant bushes should be sprayed with white helebore in order to destroy the worms. Some people spray the bushes with cold water and then dust wood ashes over them.

The chief purpose in cultivation is to keep the weeds down. Spend a short time each week in the garden with a hoe as the weeds are much more easily kept down when small than if allowed to grow large. The surface of the beds should never become solid, and if the hoe is used around the roots of the plants it lets the air into the roots, which is much needed to assist plant growth.

MISCELLANEOUS.

EMERGENCIES.

By Miss Sarah E. Conn, Strathroy.

In giving you this paper I do not expect to tell you anything new, but merely to remind you of many things you already know. An emergency is the occurrence of some thing unexpected. Every woman will meet with emergencies in her experience, and it is well to be prepared. Emergencies do not develop the ability to meet them, they call for the ability which should already have been acquired. They prove more than anything else can, whether or not a person is fitted for the responsible duties of a nurse. I do not mean a trained nurse only, but any one whom circumstances may have placed in charge of a sick person.

To be able to meet an emergency requires, first of all, self control. If a doctor or someone who is your superior in learning, is present, then be a machine. Do just as you are told, but keep your wits about you so that you will be able to obey promptly. If you are responsible then act, command; send away anyone who cannot obey.

Fainting. This is one of the most common emergencies you will meet with. What is the cause of fainting? It may be hysteria. It may be that the brain has not blood

enough to retain consciousness, it may be apoplectic, i.e., a blood clot on the brain. Whatever may be the cause, lay the person down, see that the heart and lungs are not compressed. Let the patient have plenty of fresh air and bathe the face with cold water. Spirits of ammonia is a safe and quick remedy, dose thirty drops. Never give anything until you have tried the simpler remedies. For the sake of emphasis I repeat: send everyone away who is not useful to you and do not talk about it afterwards.

Apoplexy and Alcoholism. Lay the person down and apply ice, or something cold to the back of the head.

An Epileptic Fit. Take care that the person does not injure himself. Put something such as a towel or handkerchief between the teeth to prevent biting or chewing the tongue.

Hemorrhage. Do not get frightened. Use pressure if you can apply it. If the hemorrhage is from the legs or arms tie something around between the cut and the heart. If you are skillful you can stop the bleeding in one of these ways until the doctor arrives. Hemorrhage from the lungs is characterized by its bright red color and frothy appearance. Put ice on the chest and keep the patient quiet. Give bits of ice to eat. A hemorrhage from the stomach has a dark brown color and is sometimes mixed with food. Make sure that it does not come from the throat. Give bits of cracked ice and keep the patient quiet. Put an ice bag over the stomach. For hemorrhage of the intestines, as in typhoid fever and dysentery, use ice. For nose bleed, try cold applications on the back of the neck. Put the patient on his back and plug the nose with cotton. If you cannot stop it send at once for a physician.

Burns. Perhaps the most alarming accidents are those resulting from fire. If your own clothes catch fire lie down on the floor and roll over and over, keeping the lips closed tightly. If you see another woman in the same danger (it is most likely to be a woman) throw her down and wrap around her a shawl or rug, or any heavy woollen thing at hand to stifle the flames. Begin at the head and keep the fire as much as possible from the face. The great danger is that of inhaling the flames. In the treatment of burns or scalds the first object is to exclude the air, this will at once relieve the pain. Apply soda with a wet bandage, or paint with white of egg and as one layer dries apply a second and third. Carron oil, linseed oil and lime water in equal parts is a popular remedy, but pure olive oil is as good or perhaps better, as linseed oil often contains irritating impurities. Before applying the oil to burns from acids pour on plenty of water to dilute and entirely wash off the acid. For burns from lime and potash, apply diluted vinegar to unite with the alkali and form a neutral substance. This will prevent further trouble.

For a severe bruise, apply a cold wet cloth and hold the parts above the heart.

Delirium. Be gentle but firm, never rough. Do not argue with the patient. It is often well to appear interested in the conversation. See that nothing sharp, such as knives or scissors are within reach.

Poison. An emetic is the best and safest thing. Mustard and warm water have been recommended for this.

Fracture. Put the person in as comfortable a position as possible, without too much moving. Remove the clothing and get ready for the doctor. Have plenty of hot water, fresh towels, etc., also prepare the bed by putting on a rubber sheet and draw sheets, as the patient may lie there for many weeks. The blood from an hemorrhage from any part of the body should be saved for the doctor to see.

Sunstroke or Heat Prostration. In most cases this is preceded by headache and dizziness, and more or less mental disturbance. It is not necessarily the result of exposure to the direct rays of the sun. It may be produced by intense heat of any kind. Fatigue and foul air aggravate the tendency. Symptoms: Face pale and dusky, the skin hot, the breathing labored, pulse weak and fluttering, sometimes convulsions, but more often no movement after the first insensibility till death. The temperature of the body sometimes rises to 105 degrees Fahrenheit or 106 degrees Fahrenheit. The first thing to be done is to reduce the temperature. Remove the patient to the shade, take

the clothing from the head and chest, throw cold water on the body or give a cold bath, have all the fresh air possible. As soon as the temperature goes down, artificial respiration may be resorted to. If the temperature rises again, give another cold bath. Do not give alcoholic stimulants without medical advice. Aromatic spirits of ammonia may be given if stimulants seem necessary.

Snake Bite. In the case of the bite of a snake, the bleeding should be encouraged rather than checked. Bathe in warm water and bind the limb above the point of injury to prevent the poison going to other parts of the body. Ammonia water may be used externally and internally. Keep the patient lying down. The wound should be cauterized and then poulticed. The bite of any animal should be regarded with suspicion. That of the cat or rat is said to be more dangerous than that of a dog.

Bites and Stings of Insects. For the bites and stings of insects, treat with cool lotions. For the mosquito bite ammonia water is good. Care should be taken that the sting of a bee or wasp is not left in the wound.

Poison Ivy. The eruption from poison ivy or sumach may be treated with a solution of baking soda. These are the only plants in this part of the country which are poisonous to the touch.

The Treatment of Drowned Persons. When a person is apparently drowned, first turn face downward for a moment and pull the tongue forward. See that there is no mucus in the throat. Put something under the chest, so that the water can run out. Turn him over and commence artificial respiration by raising the arms above the head and moving so that the elbows touch the sides. The two movements should be repeated slowly and steadily, not more than sixteen times in a minute, to stimulate natural breathing. The case should not be considered hopeless under two hours.

In case of an accident, send a written message for the doctor, describing as well as you can the nature and urgency of the case, so that he may come prepared with the necessary appliances. A verbal message sent by an excited bystander is never delivered intelligently.

Different doctors use different remedies, all equally good, but one can always use the simple things without seeming to be officious.

SUGGESTIONS FOR HOME NURSING.

By Miss M. A. Hart, Foley.

In country homes, many conveniences and appliances for successfully nursing the sick, which are found in cities, are absent. In the country a trained nurse is very often an impossibility, thereby leaving much of the responsibility for the patient's recovery upon some member or members of the household. The doctor can prescribe and direct, but if his instructions are not followed carefully and intelligently, the patient is very liable to succumb to the disease which holds him in its grasp.

The first and most necessary requisite of a sick room is pure air. Emanations from the body and the breath of the patient are constantly tainting it, and if it is not regularly purified the patient inhales it over and over again, poisoning his system with it. But while fresh air is absolutely imperative, you must be careful to keep the room at a proper temperature, say 70 degrees Fahrenheit, and to see that the sufferer is protected from draughts. Lower the window at the top a few inches. If the upper sash is not made to come down, remove the cleats underneath and move them down the required distance. If the weather is too cold to allow the window to be left open, cover the patient, head and all, with an extra blanket, and open the window for a short time, three or four times a day. It is no sign that the air in the room is fresh because it is cold. Cold air may have been breathed and re-breathed until it is as impure as warm air. To assist in keeping the air pure, no vessel that has been used should be left in the room one moment longer than is absolutely necessary. A little disinfecting solution should be kept standing in them.

The room should be as plain and as simply furnished as possible. All curtains and draperies are best removed, to leave no hiding places for dust and germs, and, if possible, the carpet should be taken up, and the floor wiped every day, or every other day, with a cloth wrung out of a solution of corrosive sublimate. The woodwork and furniture should also be dusted with a cloth wrung out of this solution.

An iron bed is best to use in sickness, having a woven wire mattress upon it. A feather bed should never be used if it is possible to avoid it. The lower sheet should be kept smooth and tight, to prevent bed sores. This is done by turning the edges over and pinning them at the four corners underneath the mattress. A rubber sheet is a valuable addition to a sickroom. A strip one yard wide and long enough to go across the bed, and to tuck in underneath, can be folded in a sheet and placed across the middle of the bed, with the ends pinned under the mattress. This saves the lower sheet and can be easily changed without disturbing the patient. Have the covering as light as possible, consistent with warmth. Too much clothing makes the patient restless. Florence Nightingale says: "Feverishness is supposed to be a symptom of fever: nine times out of ten it is a symptom of bedding."

Unless specially forbidden, the patient should have a bath every day. It opens the pores of the skin, and removes waste matter which otherwise would be absorbed by the body, greatly to the detriment of the patient's recovery. A sponge bath is easily and quickly given, without fatiguing the sufferer. Before beginning see that everything necessary is at hand—two blankets, two towels, sponge and soap, a basin of tepid water and a pitcher of hot water to replenish it, as the water cools. If clean clothing is to be put on have it aired and ready. To remove the night dress draw it gently up at the back till it lies in folds under the neck. Lay the arms above the head on the pillows, raise the head with one hand, and with the other slip the folds over the head, keeping the patient covered to the chin with one of the blankets. It can then be easily slipped off the arms and taken away. Before removing the night dress the blanket should be put on the bed under the patient to protect the lower sheet and mattress. This is done by rolling it lengthwise half way across, tucking the free side under the mattress and lifting the patinet over the roll. Then go around to the other side, unroll the blanket and tuck in the edges. The bed linen can be changed in this way by putting the soiled sheet before the fresh one. The upper sheet is changed by spreading the clean one over the bed clothes, holding it firmly with one hand and with the other draw them out underneath it. The soiled sheet can be taken off and the remainder of the upper clothes spread on again.

But we must not forget to bathe our patient. First bathe and dry the face, neck and ears. Then, under the blanket, bathe and dry the arms, one at a time, then the chest. Now, turn the patient on his side and do the back, then the back of the limbs and feet. Turn again on the back and wash the front of the limbs and feet. Put on clean clothing, change the blankets and put on the upper clothing.

Poultices form a very important part in the treatment of numerous ills. Flaxseed meal is the best material for a poultice. It is made by using a pint of boiling water into which is stirred, a little at a time, sufficient meal to make the poultice of the consistency of thin porridge, smooth and free from lumps. Have a soft piece of cotton, or better an old, fine guernsey free from holes, and about an inch longer than necessary and twice as wide. 6 inches by 10 inches is a good size for a poultice, but it may be made larger if necessary. Fold lengthwise and sew the two sides together, and one end. Slip into the bag, by the aid of a spoon, enough of the prepared meal to make a poultice about three-quarters of an inch thick, sew up the end and apply while hot. It is necessary to have at least two of these that a warm one may be applied when the first one gets cold. To re-heat, have a pot of boiling water on the range with a steamer set on it. Put the poultice on a plate and set in the steamer, covering closely. To keep warm roll it up on the plate while being carried to the patient. If necessary it may be held in place by a bandage. It should never be allowed to get cold or hard, but should be emptied and fresh poultices made. A little

lard added to the flaxseed helps to keep it soft. After removing the poultice the part should be rubbed with vaseline and covered with a couple of thicknesses of flannel.

Mustard is also commonly used for poultices, made in the proportion of one teaspoonful of mustard to two of flour, and made into a paste with warm water and vinegar. They are very useful to relieve sore throat and pain in the chest. A little glycerine is sometimes added, when the patient has a very sensitive skin. Liniments should be rubbed in until the skin is dry, and a piece of flannel spread over the affected part.

A few words might profitably be said with regard to emergencies and accidents. At such times we require to keep our wits about us, and to know what should be done immediately. Some valuable additions to the family medicine chest are—some old cotton, torn into strips two inches wide, for bandages, pieces of old pocket handkerchiefs or fine table linen, a box of some good salve, some reliable liniment, some adhesive plaster and a roll of absorbent cotton. Armed with these one can do much to at least relieve most of the accidents which are liable to occur at any time.

For sprains, cloths wrung out of ice water and changed often are a good remedy. Follow by a good rubbing with liniment.

Bruises are benefited by being soaked with hot water for an hour or so, then wrapped with flannel, applying heat in the shape of hot water bottles; also rub with liniment.

Burns are best treated by keeping the air excluded. If a person's clothing takes fire wrap a rug around him or turn him over and over on the floor. If the clothing sticks to the flesh, do not try to pull it off—cut it away. Should the flesh be much burned raise the upper bed clothing on boxes, so that they may not touch the patient. A doctor should be summoned as soon as possible. For slight burns vaseline or lard are good, but failing these any kind of grease without salt.

In cases of fainting lay the patient on his back, loosen the clothing about the neck and waist and raise the feet higher than the head. If consciousness does not return hold ammonia to the nose, shake the body and dash cold water in the face.

Poisoning must be treated promptly. It must be gotten out of the stomach as soon as possible. Tickling the back of the throat with a feather or the finger will cause vomiting, as will also warm water with a little mustard added. For potash, ammonia, etc., use vinegar or lemon juice, as an antidote. For acids such as carbolic, oxalic, etc., use baking soda, magnesia or lime water. For turpentine or alcohol use starch dissolved in cold water and thickened with boiling water or gum arabic, dissolved in warm water. Poisoning by arsenic, saltpetre and copperas is treated by giving the white of an egg stirred into water, flour and water or milk. Strong coffee is recommended for laudanum, morphine, belladonna. Apply cold to the head and warmth to the feet; rub the limbs and try to keep the patient awake. A light diet for a few days is advisable in all cases of poisoning.

HEREDITY.

By E. F. Irwin, M.D., Weston.

When I promised this essay, I did not realize the task I was setting for myself. I find on a very superficial review of the subject that one needs to be a specialist in biology to give a comprehensive discussion on the subject of heredity. The theories on this subject have been many and varied; some learned men have spent most of their lives trying to discover through what agency the characteristics of the parent were given to the child. All these theories would not be interesting to us, so let us be satisfied to know that the microscopical cells which go to form our minute beginning contain the chemical and physiological products which form our future destiny, mentally, morally and physically, and give us our power of resistance to temptation and disease. The factors thrown in to make up this destiny in any one generation are so

many and varied that it would be risky to wager much on the worth of any one generation.

The characteristics that are handed down through many generations are the most stable. New characteristics developing in any one generation, if not very decidedly impressed upon the individual, will be replaced in the next generation by the old family characteristics of past generations. For instance, a criminal may beget a worthy child, but the moral fibre of resistance to crime while sufficient for him, is not strongly enough developed to be imparted to his offspring, and so is replaced by the older and stronger instinct. The same is true of the power to resist disease. For instance, two generations may develop tuberculosis, a third may have sufficient resistance for himself but not strongly enough developed to impart that power of resistance to others. Therefore the fourth generation falls a victim to the disease. Hence the old proverb, "The sins of the parents shall be visited on the children even to the third and fourth generations." On the other hand, it is a great satisfaction to note that any generation may acquire new characteristics, chemical or physiological, strong enough to be passed on to the next generation. These characteristics may be mental, moral, physical or in the power of resistance to disease. Acquired physical defects, as injuries or loss of limbs do not affect future generations, except in so far as that injury deteriorates the well-being of the injured person. On the other hand, acquired disease may so change the chemical and physical condition of the cells, that many old family characteristics are replaced almost entirely by characteristics and failings foreign entirely to the old happy state of prosperity and health to which the past generations were heir. These failings may follow in the line of poisons, chemical or lead poisoning, or any infectious or wasting disease, from the results of which the parents are still suffering while the family is being reared. But these are insignificant items compared with the misery that the world has to endure as a result of what is known as fast living, especially in young men. One has only to visit the hospitals of the cities to see victims, in multitudes at the very age when they should be capable of performing the most sacred duty to their creation, their fellow creatures and the State. Yet many of these, though physical and moral wrecks, will become the parents of untold misery to die young, or to pass on this wretchedness to another generation A disease may make no appreciable physiological change in the individual, but the toxines of the disease may so change the chemical character of the germ cells that while the individual apparently becomes perfectly well, the results of the disease (but not the disease itself) may show in the next generation.

This inheritance of course is not all along the line of disease. Mental impressions and habits are always at work. For instance, a strong, healthy man may drink moderately, and it never affects him, but it so affects the chemical condition of his cells that one of his children is nervous, one an epileptic, and another a confirmed drunkard. Then, again, you see a cross, irritable child, who will not amuse herself, and is hard to please or satisfy. Just ask the mother if she were quite contented with her family affairs before the child became a baby.

And now, let me pass on to a part of the subject more interesting to me and possibly to you, i.e., the inheritance of disease. We have discussed the subject loud and long, and are slowly but surely coming to a more comprehensive knowledge. Now that all our important diseases are known to be due to specific germs, we believe that the disease itself is seldom transmitted, but rather the results of the disease and the predisposition or the lack of power to resistance. On very rare occasions, a child may be born with typhoid fever, smallpox, tuberculosis or other disease if the mother is very much afflicted with the disease at the time. Succeeding generations in certain families are peculiarly exempt from all or from certain diseases; this simply means that the power to develop natural anti-toxine has been strongly developed in some former generation, and has, through careful living and good health, been handed down; but let one generation be dissipated or in ill-health when raising his or her family, and that characteristic may be lost.

Tuberculosis, so dreaded, could be stamped out in a very few generations if it were possible to prevent contagion, so let us be as careful as we can without giving painful moments to our afflicted fellow-creatures.

And now, to sum up, let me say, young men and young women, there is no better motto than "Keep yourselves unspotted from the world."

The marked physical defects that we see every day are oftener due to lack of love and unity, than to mental impressions as we are so often lead to think. Young girls and boys, and young men and women, it becomes your duty to live so that you are worthy to receive, from the partner of your choice, the same purity of body and mind that you demand. If you must sow your wild oats, let it be in your old age when the results will harm few but yourself. Parents, do not be afraid to tell your boys and girls these things in time and leave behind you blessings and not curses for your little stay on earth.

ILL-EFFECTS OF MOUTH BREATHING.

By Dr. Mabel Henderson, Hamilton.

Mouth breathing is perverted breathing, using the mouth for a purpose for which it was never intended. Various functions are performed by the mouth, but it was not meant to be used habitually as an organ of respiration. Nature designs every organ to perform its own duties and whenever an organ assumes the duty of another, a two-fold injury occurs, first, to the organ assuming the new function, and, second, to the organ whose function is assumed. And, strange to say, the injury to the one is as great as that to the other; in other words, the sins of omission equal the sins of commission. The air, in its passage through the nose, is relieved of dust and what foreign matter it may contain; its temperature is modified to that of the body, or nearly so, and it becomes moist, all of which prepare it for contact with the sensitive membrane of the larynx and bronchial tubes. In mouth breathing these conditions are not fulfilled, and the air passes unmodified in temperature, dry and dust-laden, directly to the lungs. It practically amounts to the admission of unsuitable air to the respiratory organs. The immediate effect of mouth breathing during sleep is a dry, parched condition of the lips, tongue and throat, the final effect being inflammation, irritation and impairment of the natural functions. The acuteness of taste is diminished, the throat is prone to frequent attacks of inflammation and soreness, there is a lack of pliability of the muscles and lining membrane of the throat, the vocal powers are restricted, there is a lack of clearness in the tones, and frequent attacks of hoarseness, and voice failure on prolonged reading. Mouth breathing, in fact, is the reason why many people who possess good physical organizations, strong in every respect, except when called on for continued use of the voice, when they find it fails after a limited effort. The vocal chords have been performing the respiratory function of the nose and in doing so they have become unfit for the natural use. A person cannot expect to possess a strong, clear, durable voice and habitually breathe through the mouth during sleep. A good voice is only compatible with nasal breathing.

Mouth-breathing results in bronchial irritation and inflammation, ending in cough, expectoration, bronchitis, asthma and many other symptoms. These are the sins of commission, trying to perform the duty of one organ with another. The disuse of the nose, incident to mouth-breathing, results in enlargement of the tonsils and of the bones of the nose, and also in the thickening of the lining of the nose, so that the functions of the nose are impaired, and nasal breathing becomes more or less difficult, the sense of smell less acute, the sounding-board functions of the nose are impaired so that the natural resonance of the voice is lost. Enlarged nasal bones mean catarrh, but the removal of the enlarged portion of bones does not cure the catarrh. It only amounts to temporary suspension of prominent symptoms. From the very nature of the condition there can be no cure until the parts resume their normal functions, that is, till mouth-breathing ceases and nasal-breathing is resumed. All over

the country specialists have declared uncompromising war upon the enlarged nasal bones with cautery and knife, and the "slaughter of the innocents" still goes on without reference to any other diseased membrane or the habit of mouth-breathing that must be relieved before a cure of the nasal catarrh can be effected. Yet mouth-breathing seems to be accepted as a matter of course. Even physicians do not seem to realize that a physiological law can not be habitually violated without producing pathological results, any more than civil or moral laws can be violated without incurring the penalty. Nature's laws are inexorable and every infraction is rigidly punished. Mouth-breathing is a perverted action and cannot be indulged in without penalty. Whether we recognize the penalty as disease or not it exists just the same. Mouth-breathing is a prominent faction in the cause and continuance of all catarrhal affections of the nose, throat and bronchial tubes. Cough is a persistent symptom and cough remedies are useless in a catarrhal cough.

It is not easy to break up a well-formed habit. Will-power in the daytime and a bandage tied over the head and under the chin at night are necessary. Children should be watched. If they breathe through the mouth their noses should first be examined to see that no obstruction to breathing is present, and they should then be persistently trained to breathe through the nose.

Health Commandments:

1. Thou shalt have no other food than at meal-time.

2. Thou shalt not make unto thee any pies, or dyspepsia will be visited upon the children to the third and fourth generation of them that eat pie, and long life and vigor upon those that live prudently and keep the laws of health.

3. Remember thy bread to bake it well, for he will not be kept sound who eateth his bread as dough or sour.

4. Thou shalt not indulge sorrow nor borrow anxiety in vain.

5. Six days shalt thou wash and keep thyself clean, and the seventh day take a great bath, for in six days man sweats and gathers bacteria enough for disease, therefore the Lord has blessed the bath-tub and hallowed it.

6. Remember thy sitting-room and bed-chamber to keep them ventilated.

7. Thou shalt not eat hot biscuit.

8. Thou shalt not eat thy meat fried.

9. Thou shalt not swallow thy food unchewed, or highly spiced, or just before hard work, or just after it.

10. Thou shalt not keep late hours in thy neighbor's house, nor with his cards, nor his glass, nor with anything that is thy neighbor's.

THE RAISING OF POULTRY.

By Mrs. James Bogue, Strathroy.

I have been requested to tell you what I know about the raising and feeding of poultry. I do not know whether I can tell you anything new or anything that you do not know, but as each one of us must do her part, I shall endeavor to give you briefly a few points that I know from personal experience.

Give the hen from eleven to thirteen eggs, see that the nest is clean and dry, and dust a little sulphur in it. Place food and water conveniently near and leave the hen to do her part. Do not be like some of my acquaintances who take the hen off the nest at least a half dozen times a day to see how she is progressing, for any one who does that will find difficulty in counting her chickens.

At the end of three weeks, if no accident has happened, take the hen and chickens from the nest, dust them with insect powder and put them in a perfectly clean coop. If it has been used before, in order to be sure that it is perfectly clean, whitewash it with fresh lime, be sure to get in the corners, for nothing but perfect cleanliness will insure healthy chickens.

Feed the young chicks with bread and milk and any table scraps for a week or ten days. Then begin to give wheat sparingly, meanwhile continuing the soft food. If you let the hen run with the brood when they are two weeks old, so much the better.

If the chickens are hatched in April, you may expect eggs in September. I know of nothing on the farm that gives such quick returns as a flock of poultry, or that will at the same time afford so much pleasure.

We read in some of the papers that a flock of hens will take care of themselves. Do not try that, or the hens will not care for you, "for what is worth having, is worth caring for." Light, sunshine, plenty of clean water and a supply of green food in the shape of grass, roots, lettuce and cabbage with a supply of oyster shell or gravel, are the chief requisites in caring for a flock of poultry. Keep the roosts clean with coal oil.

To feed hens, requires judgment and attention, hence the many failures among poultry keepers. Unless you can take interest enough in them to feed and water regularly, leave the business alone.

The French people are the most successful poultry keepers in the world, for they are the ones who give the most care to their pets. With chickens, as with children, we must study their welfare, and it rests with us whether they are to live and prosper or die.

The poultry interest has made vast strides during the past few years, and many persons are making a business of it. Formerly it was chiefly in the hands of the farmer's wife or daughter, and the farmer himself did not consider it worthy of his attention. But times have changed now, and with a good market not only for eggs but also for dressed poultry, the farmer's wife sees she must keep up with the times or fail. Hence she tries to find out the best breeds both for eggs and for table use.

Some of you will say, "How can a person look after poultry and at the same time care for the house and family?" Here is one point in the favor of poultry. The majority of us stay too much in the house, simply because we have no out-door duties. Now if we can gather health and eggs at the same time, are we not the gainers in more ways than one?

DISCUSSION.

Q. In packing eggs, would you use salt or grain to pack them in?

A. Miss Laura Rose, Guelph. Eggs wrapped in paper and packed in salt, keep very well. I have also used water glass satisfactorily in the proportion of one cup of the water glass to eight cups of water. The eggs are just dropped into the liquid as gathered.

Q. How old may an egg be before it is packed?

A. The fresher the eggs for packing the better. Unfertile eggs keep much better than fertile ones.

ON GOING TO MARKET.

By Mrs. A. Brown, Winterbourne.

As I have been asked to give you something on "Going to Market," and having had between seventeen and eighteen years' experience on the Guelph Market, I would say to those who are inexperienced, and are intending to try their luck in that way, to have everything of the very best, and your butter baskets and cloths as clean and tidy as possible. Put a large cloth, say a yard and a half of bleached cotton, neatly hemmed, in your basket. Have your butter in pound rolls, wrapped up in paper made for that purpose, then pack with another cloth and fold the first cloth neatly over all. If the weather is hot, first put small pieces of ice between the butter and the basket, and larger pieces on the top, then cover carefully, and your butter will remain firm for several hours. When you uncover at the market, have a dry cloth to put over the others, as it makes things look more inviting.

In regard to carrying eggs to market, I would say I use a cloth similar to the one used for butter. First put the cloth in the basket, then a few clean oats (which I use to pack the first row of eggs), then a sheet of paper and another row of eggs, and so on until your basket is full. Then fold your cloth over the whole and your egg basket has a natty appearance. In the winter time I pack them in oats altogether, as it keeps them from freezing. Have your eggs perfectly clean and tempting looking. I keep all the shabby little eggs for home use. Often a fastidious buyer will ask if they are perfectly fresh, and pick one up and shake it, and even lick the end of it to make sure that they are not salty. At such times I recall the words:

"An ye hinna siller in yer pouch,
Ye maun hae silk upon yer tongue."

I have often noticed if white eggs are the largest, customers all prefer white eggs. On the other hand, if the brown eggs are the largest, they will say, "Please give me the brown eggs, I always like them best." Such people are like the old lady who went to her grocer, and asked for a dozen "black hen's eggs." "My good woman," he said. "I don't know a black hen's egg from any other colored, hen's egg." She replied, "Oh, but I do." He then said, "Well, just go and pick out a dozen for yourself." In a few minutes she came back with a dozen of the largest eggs she could find.

Dry picked poultry sell the best on the market. Scalded ones look blotchy and do not sell so readily. Some customers prefer them drawn, others think they keep better undrawn. In either case, see that your fowl have no food for at least twenty-four hours before killing them, as a fowl with a full, discolored-looking crop is not a "toothsome-like" bird. Another thing I would mention is, if your fowls are old, say so. When customers find that they can depend on what you say, that what they buy is just as you will recommend it to be, you will have no lack of customers.

I would advise all going to market to have everything clean, neat and tidy, just as though you were trying for a prize at the exhibition. With your produce first-class, and attending market regularly, you cannot fail to be a successful market woman.

CHEERFULNESS.

By Miss Margaret E. Ross, Clifford.

Women who are real home-makers are so in a double sense,—not only are they dispensers of material comfort and well-being to their inmates, but they embody within themselves the spirit or essence of home, so that it has long been proverbial that a home without a woman's presence is a mere mockery.

But there are women who are not true home-makers. They give faithful hearts to their work; their watchful care provides whatever their families can desire; their home-making is a labor of love, but it is a labor. They make what might be the joy of service into a burden, and, the brightness of spontaneous effort lacking, their whole atmosphere is full of unrest. They are the women who worry.

"Worry is the rust upon the blade," the rust that eats into the very hearts of many homes and steals their peace and brightness; the worm at the core of unhappy family life.

A woman's life is checkered with suffering; she seems born with a taste for it. The tendency of her mental constitution is toward sadness, and her physical derangements are often caused, or intensified, by depression. It is easy for the feminine mind to make mountains out of mole-hills, because the horizon of a woman's sphere (so-called) being narrow, she sees every obstacle at close range and is apt to get it between her and the sunlight. Besides, the mental and moral tissues render her liable to jars and wrenches to which the coarser masculine fibre would not respond. As the old Scotch hymn hath it:

"Our life contain a thousand springs
And dies if one be gone;
Strange that a harp of thousand strings
Should keep in tune so long."

Nevertheless there is no virtue in depression. It is often a matter of mere habit,—a self indulgence as much to be condemned as any other vice. If as much zeal were exercised in the pursuit of happiness as is expended in the search for misery, the world would no longer be a vale of tears.

But it is not only the uselessness of worry that makes it wrong,—besides doing no good, it does positive harm. In the home and elsewhere, worry is destructive of the happiness not only of its victim, but her associates. It weakens character, by encroaching on cheerfulness and destroying buoyancy. It tends to deaden sympathy, by centering the mind on itself. Above all it produces irritation of temper, which is liable to express itself in nagging and scolding. On all these accounts, and many more, it proves itself, not only negatively but positively harmful.

The remedy, it seems to me, is to be found in resolute and sustained cheerfulness. We cannot force love, or hope, or faith, but there is such a thing as forced cheerfulness. "There seem to be some persons, the darlings of fortune, who are born cheerful," but we of common clay are not so. There are times when it is easier to be sad than smiling and it is in these hours of heaviness that the effort to be cheerful must be made. It were no virtue to smile with a light heart, but it takes a heroic effort to be bright in spite of heart-ache.

Sometimes it is hard to be cheerful, but it is none the less a duty, and as in the case of all other duties, its performance is accompanied not only by the blessing of its immediate, visible result, but by a bracing and ennobling effect upon the character. "To have what we want is riches; but to be able to do without, is power, and, having that, we command all things."

What we all need to cultivate is the faculty of looking on the bright side, and when this attitude of mind becomes habitual, cheerfulness no longer needs to be forced. Once possessed of a firm conviction that "Behind the clouds is the sun still shining," the rainy days will have no power to dismay. "Wondrous is the strength of cheerfulness; altogether past calculation its power of endurance."

Its resistant power is also inestimable. In times of real trial, those who have frittered away force and elasticity upon every little pebble of vexation or disappointment, have neither strength nor courage to roll away the huge rock of trouble that threatens to crush them. "It is the winning of what we call little struggles that gives strength and confidence for great battles."

And if occasionally we make mistakes or grow faint-hearted in our strivings to be true home-makers and joy-givers, we canal ways begin again,—one slip does not make a failure, any more than one swallow makes a summer. So if to-day has not gone right, let us resolve to have a bright to-morrow, for

"Every day is a fresh beginning,
Every morn is the world made new.
Ye who are weary of sorrow and sinning,
Here is a beautiful hope for you.
A hope for me and a hope for you.'

"If I have faltered more or less
In my great task of happiness;
If I have moved among my race
And shown no glorious morning face;
It beams from happy human eyes
Have moved me not; if morning skies,
Books, and my food and summer rain
Knocked on my sullen heart in vain—
Lord, thy most pointed pleasure take.
And stab my spirit broad awake."—Robert Louis Stevenson.

HOW AND WHEN TO REST.

By Mrs. F. W. Elliott, Port Elgin.

"Dear me"! says someone, "must we rest by rule now?" Yes, and no. We shall not burden ourselves with rules and regulations to make us still more in need of rest.

"How to rest," depends on the nature and degree of weariness from which we are suffering, and upon our individual tastes. Sometimes we weary of the monotony of our work, or of our surroundings, and even of our own company. The remedy for that would be to get away from these for a time, see things from a different standpoint, get out of the rut, get some new pictures on memory's wall, and, perchance, come back thinking our own lot not so hard after all. But it may be that the time and labor involved in getting to and from some such a place are too great to admit of such a mode of resting so we must confine ourselves to our own resources.

We shall suppose that we have had the usual experience of a hot summer's day; up early and busy all forenoon with the thousand and one things, great and small, that fill a housekeeper's day. At last the dinner is over, the dishes washed, the house and ourselves set in order and we think we may safely snatch half an hour to rest. How shall we get the most good out of it? It will not be necessary to lie down unless we are very much exhausted. Here is where the diversity of taste comes in. One might spend the time in music, another in reading, still another might prefer to write a chatty letter to a friend, another might potter among her flowers, while some might prefer to seek a shady spot and drink in the beauty of the day. Whatever is chosen should be thoroughly congenial, and nothing in the nature of a task must be undertaken. We shall then return to our work feeling that a change is sometimes as good as a rest.

If we are really fagged out mentally or physically, or both, let us seek a darkened room, well ventilated, a fairly hard couch or bed, with a low pillow and thereon stretch our weary limbs and let ourselves go. By that, we mean, relax all our muscles, until we are limp. This is comparatively easy if our couch be long enough, broad enough, and strong enough to support us. The next step is not so easy, viz.: getting our brain in the same state, unless we are, as we sometimes say, "too tired to think." We must not think at all if we can help it, least of all should we try to plan anything, or to keep up a connected train of thought, such as how to have our dress made, or our old one re-made, what to have for tea, or what we are going to do on the morrow, etc. If we cannot quite obliterate thought let us turn it into some pleasant channel, some memory upon which we love to dwell, even castle building is permissible at such a time. Soon we shall cease to direct our thoughts for we shall be in dreamland, and if we do take more than the proverbial "forty winks," we shall not have committed one of the deadly sins. But even if we should not get so far as sleeping we shall be rested and refreshed.

There is such a thing as resting while working. There are so many things that can be done just as well sitting as standing, such as peeling potatoes and apples, kneading bread, churning, (generally), dressing, combing our hair, etc.

Supposing that we just have to keep going all day. Even then we can make our toil easier by keeping our eyes, and indeed all our senses, open to the beautiful. The color of a flower, the glory of a sunset, the sweet song of a bird, the perfume of the meadow, all are restful. Then, too, we can control our thoughts, and where work does not require fixed thought, we may practically be living in another sphere.

"When to rest." There can be no set time for this. Generally some time in the afternoon is chosen, but a good time is whenever we can. Probably we feel most like resting just after dinner, but the ever-present dinner dishes, the fear of some caller catching us in disorder,

goads us on Some of us need rest more than others, and even five minutes of complete relaxation works wonders, and may be taken more than once a day.

Let us rest before we are forced to do so, before nature goes out on strike. Method and system are all very well, but we must not be slaves to them. We mustn't wash on Monday because it is Monday, even if we have to lose all the next day on account of it, and perhaps pay a doctor's bill into the bargain.

None of us are indispensable ; the world will move on without us ; still, we needn't shorten our lives by neglecting to take proper periods of rest. There is a time for everything under the sun, therefore, there must be a time to rest.

If any of us are fortunate enough to go away for a prolonged rest, let us remember to leave our worries at home and make the most of our opportunity. Above all, don't let us go on a "Pleasure exertion," as Samantha Allan says Then let us rest in the way that seems to suit our case, and just as often as we can. We have not said anything about resting at night, as that is a foregone conclusion, but what has been said applies to that. Many a person rises with a headache and is unrefreshed, because of bad ventilation. If the nightly period of rest were not so frequently curtailed and irregular, we might not need to rest so much through the day.

ANNUAL REPORT

OF THE

FARMERS' INSTITUTES

OF THE

PROVINCE OF ONTARIO

1901.

PART III. MEETINGS AND STATISTICS.

(PUBLISHED BY THE ONTARIO DEPARTMENT OF AGRICULTURE, TORONTO.)

PRINTED BY ORDER OF

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TORONTO:

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to the King's Most Excellent Majesty.

1901.

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TORONTO.

FARMERS' INSTITUTES OF ONTARIO.

1901-1902.

ANNOUNCEMENT OF SUPERINTENDENT.

In this volume will be found the names of the speakers who are to address Farmers' Institute meetings during the coming months ; also a list of the subjects on which they are prepared to speak.

A New Departure. In order that the printing of the Sessional Papers might not be delayed, the Premier requested that this year and hereafter, the regular report of the Farmers' Institutes should be published early in the year rather than in the fall as heretofore. In this report it was customary to publish a financial statement of the Institutes, but as these statements were presented at the annual meetings in June it was not possible to include them in the regular report, they are therefore published at this time, and we trust that all those interested in Farmers' Institute work will notice the figures and take cognizance of the splendid growth in membership over former years. These statistics will hereafter be published in Part III. of the Farmers' Institute report, which from this time on takes the place of our Annual Bulletin.

Womens' Institutes. We beg to call the attention of our readers to the list of Officers for the Women's Institute contained in this volume. It will be seen that this feature of the work has grown very materially during the last year. We have now thirty-three Women's Institutes in active operation with a total membership of 1,602. We have also eight lady speakon our staff and we expect a splendid series of meetings during the coming winter.

Special Notice to Directors and Officers of Farmers' Institutes. Another Institute season is about to commence and I desire to call your attention to a few matters connected with the work

In the first place the Institutes are becoming more popular each year, as indicated by the increased attendance. Those attending are getting more out of the meetings each year, as indicated by the intelligent questions asked the delegates and the demand by the members for the reports and bulletins published by the Department.

So far, then, everything is running smoothly. Where must we look for expansion in the future? We must by persistent effort endeavor to get out to our meetings those farmers who need the instruction most. I realize that this class, the ones, who from ignorance of the best farm methods, are poor farmers indeed, are the very ones who most need instruction and are also the hardest to reach. Personal canvass is no doubt the best way to secure their attendance.

A Word to Directors. Are you helping your secretary? Have you spoken to all of your neighbors about attending the nearest Institute meeting? Have you secured a large membership in your township and sent the names and fees into your secretary? Have you thought over what you are going to say at the next meeting you attend? Have you taken any notes on your work since the last meeting that would interest your neighbors and serve to bring out a discussion at the coming meeting?

If you have not done these things you have fallen short of the standard set for a director of a Farmers Institute

To the President. Are you thinking of any plans by which you can make your meetings more interesting and instructive? Have you yet arranged in your mind or on paper a few suitable remarks for opening each meeting? Have you consulted with your secretary as to any new features you propose to introduce, or have you picked out and conferred with him about certain men who might read papers or deliver addresses at the meetings?

If you fail to think of these things you are not a model president, and your Institute will not make the progress that it should during your term of office.

To the Secretary. To you must fall the heavy share of the work. You are probably the most concerned as to the success of the year's work. What have you done by way of preparation for this winter's meetings? Have you spoken to any of the men or women in your district about helping at the meetings? Have you thought about any new features that might be introduced to help your attendance and increase your membership? Have you written to each of your directors asking their co-operation and advice? Have you consulted with your president as to a plan of work for your series of meetings?

ATTENDANCE, MEMBERSHIP, ETC.

1900-1901.

The year 1900-1901 has been a very satisfactory one from every standpoint. The attendance at the meetings has increased, and the interest has been kept up throughout the entire season. We are pleased to note that the membership ending June 30th, 1901, is 20,387. The number of meetings held was 730, with an attendance of 131,653 persons.

The Institute holding the largest number of meetings during the year ending June 30th, 1901, are :

Hastings, N.	22	Peel	12
Ontario S.	18	Huron, W.	11
Waterloo, S.	15	Ontario, N.	11
Durham, W.	14	York, E.	11
Halton	14	Grey, N.	10
Haldimand	12	Prince Edward	10
Middlesex, N	12		

The following is a list of the Institutes having the largest attendance at their meetings during the season :—

	No. of Meetings.	Attendance.		No. of Meetings.	Attendance.
Halton	14	5,490	Renfrew, S.	6	2,434
Bruce, S.	7	5,110	Huron, S.	8	2,275
Norfolk, N.	8	3,790	Grey, S.	7	2,250
Waterloo, S.	15	3,589	Victoria, E.	8	2,225
Huron, W.	11	3,260	Waterloo, N.	9	2,195
Bruce, W.	8	2,915	Perth, N.	8	2,155
Hastings, N	22	2,781	Peel	12	2,035
Northumberland, E.	7	2,580	Leeds, S.	7	2,020
Middlesex, N.	12	2,545			

The Institutes having the largest membership to July, 1901, are :

Halton	748	Huron, W	363
Hastings, N	578	Perth, N.	362
Waterloo, S	533	Haldimand	361
Peel	525	Huron, E.	357
Wellington, C.	404	Lanark, N.	339
Lambton, W.	401	Waterloo, N.	337
Ontario, S.	385	Oxford, S.	324
Norfolk, N.	375	Oxford N.	314
Ontario, N.	373	Northumberland, E.	303
Middlesex, N.	367		

The following list shows the Institutes having the smallest membership :—

Port Carling and Bala	19	Renfrew, N.	79
Amherst Island	44	Carleton	79
Muskoka, C.	51	Brant, S.	87
Cornwall	59	Prescott	90
Nipissing, W.	70	Algoma, C.	92
Brant, N.	73	Essex, N.	97
Addington	78		

REGULAR AND SUPPLEMENTARY MEETINGS AND DELEGATES THEREFOR.

REGULAR MEETINGS.

Division 1. G. C. Caston, Craighurst ; J. E. Meyer, Kossuth ; Mrs. Colin Campbell, Goderich.

1 Clifford (Town Hall)	Union	Jan. 7th.
2 Lakelet (Temperance Hall)	Union	Jan. 8th.
3 Walkerton (Town Hall)	S. Bruce	Jan. 9th,

REGULAR MEETINGS. *Con.*

4	Paisley (Town Hall)	C. Bruce	Jan. 10th.
5	Port Elgin (Town Hall)	W. Bruce	Jan. 11th.
6	Tara (Vandusen's Hall)	W. Bruce	Jan. 13th.
7	Spry (Schoolhouse)	N. Bruce	Jan. 15th.
8	Lion's Head (Town Hall)	N. Bruce	Jan. 16th.
9	Chesley (Town Hall)	C Bruce	Jan. 17th.
10	Durham (Town Hall)	S. Grey	Jan. 18th
11	Holstein (Town Hall)	S. Grey	Jan. 20th.
12	Gorrie (Town Hall)	E. Huron	Jan. 21st.
13	Brussels (Town Hall)	E. Huron	Jan. 22nd.
14	Clinton (Town Hall)	W. Huron	Jan. 23rd.
15	Dugannon (Temperance Hall)	W. Huron	Jan. 24th.
16	Holyrood (Temperance Hall)	S. Bruce	Jan. 25th.

Division 2. D. Drummond, Myrtle ; G. R. Cottrell, Milton ; Elmer Lick, Oshawa.

1	Milverton (Grosch's Hall)	N. Perth	Jan. 7th.
2	Shakespeare (Temperance Hall)	N. Perth	Jan. 8th.
3	Mitchell (Town Hall)	S Perth	Jan. 9th.
4	Brucefield (Dickson's Hall)	S. Huron	Jan. 10th.
5	Exeter (Town Hall)	S. Perth	Jan. 11th.
6	St. Mary's	S. Huron	Jan. 13th.
7	Kintore (Foresters' Hall)	N. Oxford	Jan. 14th.
8	Thorndale (Harding's Hall)	E. Middlesex	Jan. 15th.
9	Harrietsville (Oddfellows' Hall)	E. Middlesex	Jan. 16th.
10	Coldstream (Township Hall)	N. Middlesex	Jan. 17th.
11	Adelaide (Town Hall)	N. Middlesex	Jan. 18th.
12	Parkhill (Town Hall)	N. Middlesex	Jan 20th.
13	Ailsa Craig (Town Hall)	N. Middlesex	Jan. 21st.
14	Forest (Town Hall)	E. Lambton	Jan. 22nd.
15	Kingscourt (Schoolhouse)	E. Lambton	Jan. 23rd.
15	Oilsprings	W. Lambton	Jan. 24th.
17	Brigden (McKenzie's Hall)	W. Lambton	Jan. 25th.
18	Appin (Township Hall)	W. Middlesex	Jan. 27th.
19	Mt. Bridges, (Township Hall)	W. Middlesex	Jan 28th.

Division 3. C. W. Nash, Toronto ; R. S. Stevenson, Ancaster.

1	Mount Elgin (Foresters' Hall)	S. Oxford	Jan. 8th.
2	Norwich (Foresters. Hall)	S. Oxford	Jan. 9th.
3	Courtland (Town Hall)	N Norfolk	Jan. 10th.
4	Delhi (Morgan's Hall)	N. Norfolk	Jan 11th.
5	Aylmer (Town Hall)	E Elgin	Jan. 13 & 14th.
6	Middlemarch (Grange Hall)	W. Elgin	Jan. 15th.
7	Dutton (Town Hall)	W. Elgin	Jan. 16th.
8	Rodney (Township Hall)	W. Elgin	Jan. 17th.
9	Highgate (Highgate Hall)	E. Kent	Jan 18th.
10	Croton (Croton Hall)	E. Kent	Jan. 20th.
11	Eberts (Township Hall)	W. Kent	Jan. 21st.
12	Dover Centre (Grange Hall)	W. Kent	Jan. 22nd.
13	Tecumseh (St. John's Hall)	N. Essex	Jan 23rd.
14	Essex (I. O. F. Hall)	S. Essex	Jan. 24th & 25th.
15	S. Woodslee (St. Lawrence Hall)	N. Essex	Jan. 27th.

Division 4 : Major Jas. Sheppard, Queenston ; Miss Blanche Maddock, Guelph.

1	Princeton (Duke's Hall)	N. Oxford	Jan. 7th.
2	Burford (Cornish Hall)	S Brant	Jan. 8th.
3	Oshweken (Council House)	S. Brant	Jan. 9th.
4	Ancaster (Township Hall)	S. Wentworth	Jan. 10th.
5	Stoney Creek (New Hall)	S. Wentworth	Jan. 11th.
6	Campden (Fry's Hall)	Lincoln	Jan. 13th.
7	Queenston (Schoolhouse)	Lincoln	Jan. 14th.
8	Crowland (Town Hall)	Welland	Jan. 15th.
9	Ridgeway (Town Hall)	Welland	Jan. 16th.
10	Marshville (Town Hall)	Monck	Jan. 17th.
11	Attercliffe (Cheese Factory)	Monck	Jan. 18th.

REGULAR MEETINGS.—*Con.*

12	Fisherville (Town Hall)	Haldimand	Jan. 20th.
13	Hagersville (Opera House)	Haldimand	Jan. 21st.
14	Waterford (Town Hall)	N. Norfolk	Jan. 22nd.
15	Vittoria (Lecture Room)	S. Norfolk	Jan. 23rd.
16	Langton (Town Hall)	S. Norfolk	Jan. 24th.

DIVISION 5: T. G. Raynor, Rose Hall; J. W. Clark, Onondaga.

1	St. George (Library Hall)	N. Brant	Jan. 7th and 8th.
2	Rockton (Township Hall)	N. Wentworth	Jan. 9th.
3	Freelton (Township Hall)	N. Wentworth	Jan. 10th.
4	Nassagaweya (Township Hall)	Halton	Jan. 11th.
5	Nelson (Township Hall)	Halton	Jan. 13th.
6	Milton (Town Hall)	Halton	Jan. 14th.
7	Stewarton (Town Hall)	Halton	Jan. 15th.
8	Ospringe (Schoolhouse)	C. Wellington	Jan. 16th.
9	Bellwood (Township Hall)	C. Wellington	Jan. 17th.
10	Rockwood (Town Hall)	S. Wellington	Jan. 18th.
11	Aberfoyle (Town Hall)	S. Wellington	Jan. 20th.
12	Galt Town Hall)	S. Waterloo	Jan. 21st.
13	New Hamburg (Wm Tell Hall)	S. Waterloo	Jan. 22nd.
14	Linwood (Spahr's Hall)	N. Waterloo	Jan. 23rd.
15	Elmira (E.M.S. Hall)	N. Waterloo	Jan. 24th.
16	Drayton (Town Hall)	W. Wellington	Jan. 25th.
17	Mooretield (Township Hall)	W. Wellington	Jan. 27th.
18	Farewell	E. Wellington	Jan. 28th.
19	Conn (Orange Hall)	E. Wellington	Jan. 29th.

DIVISION 6: Duncan Anderson, Rugby; Dr Henry G. Reed, Georgetown.

1	Kemble (Schoolhouse)	N. Grey	Jan. 7th.
2	Owen Sound (Y.M.C. A. Hall)	N. Grey	Jan. 8th.
3	Flesherton (Township Hall)	C. Grey	Jan 9th.
4	Shelburne (Town Hall)	Dufferin	Jan. 10th.
5	Camilla (Private Hall)	Dufferin	Jan. 11th.
6	Tottenham (Town Hall)	S. Simcoe	Jan. 13th.
7	New Lowell (Town Hall)	W. Simcoe	Jan. 14th.
8	Stayner (Stewart's Hall)	W. Simcoe	Jan. 15th.
9	Thornbury (Town Hall)	C. Grey	Jan. 16th.
10	Meaford (Town Hall)	N. Grey	Jan. 17th.
11	Minesing (Workman's Hall)	C. Simcoe	Jan. 18th.
12	Phelpston (Village Hall)	C. Simcoe	Jan. 20th.
13	Waverley (Orange Hall)	C. Simcoe	Jan. 21st.
14	Wyevale (Orange Hall)	C. Simcoe	Jan. 22nd.
15	Lafontaine (Picquac Hall)	C. Simcoe	Jan. 23rd.
16	Midland (Town Hall)	C. Simcoe	Jan. 24th.
17	Matchedash	E. Simcoe (aft.)	Jan. 25th.
18	Coldwater	E. Simcoe (eve.)	Jan. 25th.
19	Orillia	E. Simcoe	Jan. 27th.
20	Stroud (Temperance Hall)	S. Simcoe	Jan 28th.
21	Kettleby (Temperance Hall)	N. York	Jan. 29th.
22	Newmarket (Temperance Hall)	N. York	Jan. 30th.

DIVISION 7A: Henry Glendenning, Manilla; Miss Laura Rose, Guelph.

1	Bronte (Town Hall)	Halton	Nov. 21st.
2	Kilbride (Town Hall)	Halton	Nov. 22nd.
3	Hornby (Town Hall)	Halton	Nov. 23rd.
4	Ballinafad (Town Hall)	Halton	Nov. 25th.
5	Cheltenham (Orange Hall)	Peel	Nov. 26th.
6	Streetsville (Town Hall)	Peel	Nov. 27th.
7	Woodbridge (Orange Hall)	W. York	Nov. 28th.
8	Weston (Dufferin Hall)	W. York	Nov. 29th.
9	Wexford (Methodist Hall)	E. York	Nov. 30th.
10	Agincourt (Temperance Hall)	E. York	Dec. 2nd.
11	Bowmanville (Good Templar's Hall)	W. Durham (afternoon)	Dec. 3rd.
12	Courtice (Sons' Temperance Hall)	W. Durham (evening)	Dec. 3rd.

REGULAR MEETINGS,—*Con.*

13 Orono (Town Hall)	W. Durham (afternoon)	Dec.	4th
14 Newcastle (Town Hall)	W. Durham (evening)	Dec.	4th.
15 Millbrook (Town Hall)	E. Durham	Dec.	5th.
16 Bethany (Town Hall)	E. Durham	Dec.	6th.
17 Blackstock (Town Hall)	W. Durham	Dec.	7th.

DIVISION 7B : Duncan Anderson, Rugby : Miss Blanche Maddock, Guelph.

1 Pickering (Fire Hall)	S. Ontario	Nov.	21st.
2 Brooklin (Masonic Hall)	S. Ontario	Nov.	22nd.
3 Manchester (Town Hall)	S. Ontario	Nov.	23rd.
4 Zephyr (Town Hall)	N. Ontario	Nov.	25th.
5 Cannington (Town Hall)	N. Ontario	Nov.	26th.
6 Oakwood (Township Hall)	W. Victoria	Nov.	27th.
7 Lindsay (Town Hall)	W. Victoria	Nov.	28th.
8 Fenelon Falls (Dickson's Hall)	E. Victoria	Nov.	29th.
9 Bobcaygeon (Town Hall)	E. Victoria	Nov.	30th.
10 Peterboro (Council Chamber)	W. Peterboro (afternoon	Dec.	2nd.
11 North Monaghan (Town Hall)	W. Peterboro (evening)	Dec.	2nd.
12 Lakefield (Town Hall)	W. Peterboro	Dec.	3rd.
13 Keene (Town Hall)	E. Peterboro	Dec.	4th.
14 Norwood (Town Hall)	E. Peterboro	Dec.	5th.
15 Stirling (Music Hall)	N. Hastings	Dec.	6th.
16 Madoc (Masonic Hall)	N. Hastings	Dec.	7th.

DIVISION 8 : R. McCulloch, Snelgrove ; G. R. Cottrell, Milton ; Miss Laura Linton, Guelph.

1 Harwood (Boyle's Hall	W. Northumberland	Nov.	25th.
2 Grafton (Town Hall)	W. Northumberland	Nov.	26th.
3 Warkworth (Town Hall)	E. Northumberland	Nov.	27th.
4 Brighton (Opera House)	E. Northumberland	Nov.	28th.
5 Ameliasburg (Centre Schoolhouse)	Prince Edward	Nov.	29th.
6 Demorestville (Town Hall)	Prince Edward	Nov.	30th.
7 Frankford (Sweetman's Hall)	W. Hastings	Dec.	2nd.
8 Wallbridge (Town Hall)	W. Hastings	Dec.	3rd.
9 Newburg (Finkle's Hall)	Addington	Dec.	4th.
10 Centreville (Town Hall)	Addington	Dec	5th.
11 Tweed (Town Hall)	E. Hastings	Dec.	6th.
12 Cannifton (Township Hall)	E Hastings	Dec.	7th.

DIVISION 9A : C. W. Nash, Toronto ; D. Drummond, Myrtle.

1 Napanee (Town Hall)	Lennox	Nov.	25th.
2 Selby (Town Hall)	Lennox	Nov.	26th.
3 Emerald (Cheese Factory)	Amherst Island	Nov.	27th.
4 Stella (Town Hall)	Amherst Island	Nov.	28th.
5 Westbrooke (Westbrooke Hall)	Frontenac (afternoon)	Nov	29th.
6 Cataraqui (Town Hall)	Frontenac (evening)	Nov.	29th.
7 Inverary (Orange Hall)	Frontenac (afternoon)	Nov.	30th.
8 Sunbury (Town Hall)	Frontenac (evening)	Nov.	30th.
9 Newboro (Town Hall)	Leeds, S	Dec.	2nd.
10 Lansdowne (Town Hall)	Leeds, S	Dec.	3rd.
11 Mallorytown (Oddfellows' Hall)	Brockville	Dec.	4th.
12 Addison (Ashwood Hall)	Brockville	Dec.	5th.
13 Maitland (Workman's Hall)	S. Grenville	Dec.	6th.
14 Shanly (Orange Hall)	S. Grenville	Dec.	7th.

DIVISION 9B : Andrew Elliott, Galt ; R. S. Stevenson, Ancaster.

1 Vernon (Town Hall	Russell	Nov.	25th.
2 Vars (Town Hall	Russell	Nov.	26th.
3 Moose Creek	Stormont	Nov.	27th.
4 Maxville (Public Hall)	Glengarry	Nov.	28th.
5 Dalkeith (Public School	Glengarry	Nov.	29th.
6 Vankleek Hill (High School)	Prescott	Nov. 30th and Dec.	2nd.
7 North Branch (Schoolhouse)	Cornwall	Dec.	3rd.

REGULAR MEETINGS.—*Con.*

8 South Branch (Patron's Hall)	Cornwall	Dec.	4th.
9 Aultsville	Stormont	Dec.	5th.
10 Morrisburg (Music Hall)	Dundas	Dec.	6th.
11 Iroquois (Town Hall)	Dundas	Dec.	7th.

DIVISION 10. Major James Sheppard, Queenston; Chas. S. Moore, Stanbridge, Que.

1 Merrickville (Town Hall)	N. Leeds and Grenville	Nov.	25th.
2 Kemptville (Town Hall)	N. Leeds and Grenville	Nov.	26th.
3 South March (Town Hall)	Carleton	Nov.	27th.
4 Stittsville (Green's Hall)	Carleton	Nov.	28th.
5 Renfrew (Temperance Hall)	S. Renfrew	Nov.	29th.
6 Stewartsville (Town Hall)	S. Renfrew	Nov.	30th.
7 Beachburg (Town Hall)	N. Renfrew	Dec	2nd.
8 Osceola (Town Hall)	N. Renfrew	Dec.	3rd.
9 Almonte (Town Hall)	N. Lanark	Dec.	4th.
10 Carleton Place (Town Hall)	N. Lanark	Dec.	5th.
11 Smith's Falls (Town Hall)	S. Lanark	Dec.	6th.
12 Perth (Town Hall)	S. Lanark	Dec.	7th.

DIVISION 11.—T. H. Mason, Straffordville; F. A. Sheppard, Queenston.

1 Powassan (Stewart's Hall)	E. Parry Sound	Jan	7th.
2 Trout Creek (Trussler's Hall)	E. Parry Sound	Jan.	8th.
3 South River (Library Hall)	E. Parry Sound	Jan.	9th.
4 Sundridge (Orange Hall)	E. Parry Sound	Jan.	10th.
5 Burk's Falls (Wilson's Hall)	E. Parry Sound	Jan.	11th.
6 Kearney	E. Parry Sound	Jan.	13th.
7 Sprucedale	E. Parry Sound	Jan.	14th.
8 Starratt's Corners	E. Parry Sound	Jan.	15th.
9 Magnetawan (Orange Hall)	E. Parry Sound	Jan.	16th.
10 Dunchurch (Keley Hall)	W. Parry Sound (aft.)	Jan.	17th.
11 McKellar (Armstrong Hall)	W. Parry Sound (eve.)	Jan	17th.
12 Broadbent (Schoolhouse)	W. Parry Sound (aft.)	Jan.	18th.
13 Orrville (Schoolhouse)	W. Parry Sound (eve.)	Jan.	18th.
14 Parry Sound (Town Hall)	W. Parry Sound.	Jan.	20th.
15 Carling (Schoolhouse)	W. Parry Sound (aft.)	Jan.	21st.
16 McDougal's Schoolhouse	W. Parry Sound (eve.)	Jan.	21st.
17 Falding (Rankin Hall)	W. Parry Sound	Jan.	22nd.
18 Novar (Atkin's Hall)	N. Muskoka	Jan.	23rd.
19 Huntsville (Court House)	N. Muskoka	Jan.	24th.
20 Hillside (Schoolhouse)	N. Muskoka	Jan.	25th.
21 Emberson (Orange Hall)	N. Muskoka	Jan.	27th.
22 Ravenscliffe (Patrons' Hall)	N. Muskoka	Jan.	28th.
23 Stisted (Township Hall)	N. Muskoka	Jan.	29th.
24 Utterson (Town Hall)	C. Muskoka	Jan.	30th.
25 Port Sydney (Music Hall)	C. Muskoka (aft.)	Jan.	31st.
26 Allansville (Schoolhouse)	C. Muskoka (eve.)	Jan.	31st.
27 Raymond (Orange Hall)	C. Muskoka (aft.)	Feb.	1st.
28 Ufford (Mr. Kay's House)	C. Muskoka (eve.)	Feb.	1st.
29 Bracebridge (Town Hall)	S. Muskoka	Feb.	3rd.
30 Baysville (Town Hall)	S. Muskoka	Feb.	4th.
31 Uffington	S. Muskoka (aft.)	Feb.	5th.
32 Germania (Weise's Schoolhouse)	S. Muskoka (eve.)	Feb.	5th.
33 Gravenhurst (Town Hall)	S. Muskoka	Feb.	6th.
34 Bala (Currie's Hall)	Pt. Carling & Bala	Feb.	7th.
35 Port Carling (Victoria Hall)	Pt. Carling & Bala	Feb.	8th.

DIVISION 12.—W. S. Fraser, Bradford; Myron A. Gee, Fisherville.

1 North Bay (Town Hall)	W. Nippissing	Jan.	7th.
2 Sturgeon's Falls	W. Nipissing	Jan	8th.
3 Verner	W. Nipissing	Jan.	9th.
4 Warren	W. Nipissing	Jan.	10th.
5 S. Tarentarus (Schoolhouse)	C. Algoma	Jan.	11th.
6 E. Korah (Schoolhouse)	C. Algoma	Jan.	13th.
7 W. Korah (Schoolhouse)	C. Algoma	Jan.	14th.

REGULAR MEETINGS.—*Con.*

8 Base Line (Schoolhouse)	C. Algoma	Jan. 15th.
9 Desbarats	St. Joseph's Is. (aft.)	Jan. 16th.
10 McLennan (Temperance Hall)	St. Joseph's Is. (eve.)	Jan. 16th.
11 Richard's Landing (Town Hall)	St. Joseph's Is.	Jan. 17th.
12 Jocelyn (Kent's Hall)	St. Joseph's Is.	Jan. 18th.
13 Marksville (Town Hall)	St. Joseph's Is.	Jan. 20th.
14 Cloudslee (Schoolhouse)	E. Algoma (aft.)	Jan. 21st,
15 Thessalon (Town Hall)	E. Algoma (eve.)	Jan. 21st.
16 Sowerby (Maccabee's Hall)	E. Algoma	Jan. 22nd.
17 Iron Bridge (Orange Hall)	E. Algoma	Jan. 23rd.
18 Bellingham	E. Algoma	Jan. 24th.
19 Walford (Schoolhouse)	E. Algoma	Jan. 25th.
20 Massey (Schoolhouse)	E. Algoma	Jan. 27th.
21 Providence Bay (Schoolhouse)	E. Manitoulin	Jan. 29th.
22 Mindemoya (Schoolhouse)	E. Manitoulin	Jan. 30th.
23 Tehkummah (Schoolhouse)	E. Manitoulin	Jan. 31st.
24 Manitowaning (Town Hall)	E. Manitoulin	Feb. 1st.
25 Green Bay (Schoolhouse)	E. Manitoulin	Feb. 3rd.
26 Sheguiandah (Trotter's Hall)	E. Manitoulin	Feb. 4th.
27 Little Current (Turner's Hall)	E Manitoulin	Feb. 5th.

SUPPLEMENTARY MEETINGS.

Division 1.—J. E. Orr, Fruitland ; W. S. Tompkins, Grand View, N.B.

1 Harriston (Town Hall)	Union	Feb. 4th.
2 Drew (Temperance Hall)	Union	Feb. 5th.
3 Dromore (Russell Hall)	S. Grey	Feb. 6th.
4 Ayton (Doersam's Hall	S. Grey	Feb. 7th.
5 Hanover (Telford's Hall)	S. Grey	Feb. 8th.
6 Elmwood (Elmwood Hall)	S. Grey	Feb. 10th.
7 Hepworth (Schoolhouse)	N. Bruce	Feb. 11th.
8 S. S. Sec. No. 4 (Anabel Schoolhouse)	N. Bruce (aft.)	Feb. 12th.
9 Wiarton (Town Hall)	N. Bruce (eve.)	Feb. 12th.
10 Mar (Schoolhouse)	N. Bruce	Feb. 13th.
11 Allanford (Orange Hall)	W. Bruce	Feb. 14th.
12 Arkwright (Township Hall)	W Bruce	Feb. 15th.
13 Port Elgin (Town Hall)	W. Bruce	Feb. 17th.
14 Ribbey's Schoolhouse	W. Bruce	Feb. 18th.
15 Underwood (Township Hall)	W. Bruce	Feb. 19th.
16 Tiverton (Town Hall)	W. Bruce	Feb. 20th.
17 Kincardine (Town Hall)	C. Bruce	Feb. 21st.
18 Ripley (Agricultural Hall)	C. Bruce	Feb. 22nd.
19 Bervie (Orange Hall)	C. Bruce	Feb. 24th.
20 Glamis (Mechanic's Hall)	C. Bruce	Feb. 25th.
21 Chepstowe (Hartleib's Hall)	C. Bruce	Feb. 26th.
22 Cargill (Foresters Hall)	S. Bruce	Feb. 27th.
23 Mildmay (Township Hall)	S. Bruce	Feb. 28th.
24 Belmore (Forester's Hall)	S. Bruce	Mar. 1st.
25 Teeswater (Township Hall)	S. Bruce	Mar. 3rd.
26 Lucknow (Town Hall)	S. Bruce	Mar. 4th.

Division 2 a.—Andrew Elliott, Galt ; C. W. Nash, Toronto.

1 Wingham (Town Hall)	W. Huron	Feb. 4th.
2 Auburn (I O G.T. Hall)	W. Huron	Feb. 5th.
3 Port Albert (Forester's Hall)	W. Huron	Feb 6th.
4 Benmiller (Gledhill's Hall)	W. Huron	Feb. 7th.
5 Bayfield	S. Huron	Feb. 8th.
6 Zurich (Town Hall)	S. Huron	Feb. 10th.
7 Crediton	S. Huron	Feb. 11th.
8 Greenway (Wilson's Hall)	N. Middlesex	Feb. 12th.
9 Sylvan (Macabee's Hall)	N. Middlesex	Feb. 13th.
10 Beechwood (Grange Hall)	N. Middlesex	Feb. 14th.
11 West McGillivray (Town Hall)	N. Middlesex	Feb. 15th.
12 Lucan (Town Hall)	N. Middlesex	Feb. 17th.

SUPPLEMENTARY MEETINGS.—*Con.*

13 Granton (Town Hall)	N. Middlesex	Feb.	18th.
14 Lobo (Masonic Hall)	N. Middlesex	Feb.	19th.
15 Arkona (Showless' Hall)	E. Lambton	Feb.	20th.
16 Uttoxeter (Grange Hall)	E. Lambton	Feb.	21st.
17 Sarnia Town (Council Chamber)	W. Lambton (aft.)	Feb.	22nd.
18 Sarnia Township (Moor Line Schoolhouse)	W. Lambton (eve.)	Feb.	22nd.
19 Petrolia (Council Chamber)	W. Lambton	Feb.	24th.
20 Courtright (Stewart's Hall)	W. Lambton	Feb.	25th.
21 Wilkesport (Richmond Hall)	W. Lambton	Feb.	26th.
22 Beacher (Schoolhouse)	W. Lambton	Feb.	27th.
23 Rutherford (Township Hall)	W. Lambton	Feb.	28th.
24 Oakdale (Schoolhouse)	E. Lambton	Mar.	1st.
25 Inwood (Orange Hall)	E Lambton	Mar.	3rd.
26 Alvinston (Town Hall)	E Lambton	Mar.	4th.

Division 2 B.—W. N. Hutt, Southend; G. R. Cottrell Milton, (4th to 8th inclusive); Prof. W. R. Graham, O.A.C., Guelph (10th to 21st inclusive); Miss Helen McAllister, Coventry.

1 Rostock (Hall)	N. Perth	Feb.	4th.
2 Monkton (Town Hall)	N. Perth	Feb.	5th.
3 Atwood (Agricultural Hall)	N. Perth	Feb.	6th.
4 Millbank (Town Hall)	N. Perth	Feb.	7th.
5 Gowanstown (Hall)	N. Perth	Feb.	8th.
6 Bluevale (Forester's Hall)	E. Huron	Feb.	10th.
7 Fordwich (Donaghey's Hall)	E. Huron	Feb.	11th.
8 Molesworth	E. Huron	Feb.	12th.
9 Ethel (Town Hall)	E. Huron	Feb.	13th.
10 Walton (Workmen's Hall)	E. Huron	Feb.	14th.
11 Murdie's (Schoolhouse)	E. Huron	Feb.	15th.
12 Staffa (Public Hall)	S. Perth	Feb.	17th.
13 Kirkton (Aberdeen Hall)	S. Perth	Feb.	18th.
14 Russeldale (Chosen Friends)	S. Perth	Feb.	19th.
15 Sebringville (Forester's Hall)	S. Perth	Feb.	20th.
16 Tavistock (Public Hall)	S. Perth	Feb.	21st.

Division 3 A.—Henry Glendenning, Manilla; Miss Blanche Maddock, Guelph.

1 Drumbo (Town Hall)	N. Oxford	Feb.	4th.
2 Braemar (Town Hall)	N. Oxford	Feb.	5th.
3 Brooksdale (Forester's Hall)	N. Oxford	Feb.	6th.
4 Lakeside (Town Hall)	N. Oxford	Feb.	7th.
5 Wellburn (German Hall)	E. Middlesex	Feb.	8th.
6 Bryanston (Temperance Hall)	E. Middlesex	Feb.	10th
7 Crumlin	E. Middlesex	Feb.	11th.
8 Ilderton (Forester's Hall)	E. Middlesex	Feb.	12th.
9 Hyde Park	E. Middlesex	Feb.	13th.
10 Dorchester Station (Town Hall)	E. Middlesex	Feb.	14th.
11 Belmont (Masonic Hall)	E. Middlesex	Feb.	15th.
12 Glanworth (Hall)	E. Middlesex	Feb.	17th.
13 Lambeth (Masonic Hall)	E. Middlesex	Feb.	18th.
14 Riverside (Schoolhouse) S. S. No. 1.	W. Middlesex (aft.)	Feb.	19th.
15 Melbourne (Woodman's Hall)	W. Middlesex (eve.)	Feb.	19th.
16 Walker's (Schoolhouse)	W. Middlesex (aft.)	Feb.	20th.
17 Napier (Township Hall)	W. Middlesex (eve.)	Feb.	20th
18 Glencoe (Town Hall)	W. Middlesex	Feb.	21st.
19 Wardsville (Town Hall)	W. Middlesex	Feb.	22nd.

Division 3 B.—A. McNeill, Walkerville; Dr. Henry G. Reed, Georgetown; Mrs. A. Kinney, Grandview.

1 Shedden (Morrison's Hall)	W Elgin	Feb.	4th.
2 Dutton (Town Hall)	W. Elgin	Feb.	5th.
3 West Lorne (Township Hall)	W. Elgin	Feb.	6th.
4 Ridgetown (Township Hall)	E. Kent	Feb.	7th.
5 Blenheim (Township Hall)	E. Kent	Feb.	8th.
6 Bridgend (Grange Hall)	E. Kent	Feb.	10th.

SUPPLEMENTARY MEETINGS.—*Con.*

7	Thamesville (Town Hall)	E. Kent	Feb. 11th.
8	Zone (Town Hall)	E. Kent	Feb. 12th.
9	Tupperville (Keith's Schoolhouse)	W. Kent	Feb. 13th.
10	Fletcher (Morphey's Hall)	W. Kent	Feb. 14th.
11	Tilbury (Palmer's Hall)	W. Kent	Feb. 15th.
12	Wheatley (Gibson's Hall)	W. Kent and South Essex	Feb. 17th. Feb. 18th.
13	Leamington (Town Hall)	S. Essex	Feb. 19th.
14	Kingsville (Town Hall)	S. Essex	Feb. 20th.
15	Harrow Town Hall)	S. Essex	Feb. 21st.
16	Amherstburg (Town Hall)	S. Essex	Feb. 22nd.
17	Maidstone	N. Essex	Feb. 24th.
18	Sandwich S. (Orange Hall)	N. Essex	Feb. 25th.
19	Belle River (Town Hall)	N. Essex	Feb. 26th.
20	Comber (Town Hall)	N. Essex	Feb. 27th.
21	Yarmouth Centre (Town Hall)	E. Elgin (aft.)	Feb. 28th.
22	Sparta (Royal Templars' Hall)	E. Elgin (eve.)	Feb. 28th.
23	Mount Salem (Garner's Hall)	E. Elgin (aft.)	Mar. 1st.
24	Straffordville (Town Hall)	E. Elgin (eve.)	Mar. 1st.

DIVISION 4 A : T. G. Raynor, Rose Hall ; T. H. Mason, Straffordville : (Feb. 11th to March 5th). C. A. Zavitz, B. S. A., Guelph, (4th to 10th inclusive).

1	Bealton (Bealton Hall)	N. Norfolk	Feb. 4th.
2	Windham Centre (Town Hall)	N. Norfolk	Feb. 5th.
3	Kelvin (Kelvin Hall)	N. Norfolk	Feb. 6th.
4	Scotland (Fosters' Hall)	S. Brant	Feb. 7th.
5	Harley (Township Hall)	S. Brant	Feb. 8th.
6	Mount Pleasant (Foresters' Hall)	S. Brant	Feb. 10th.
7	Cathcart (Foresters' Hall)	S. Brant	Feb. 11th.
8	Oxford Centre (Town Hall)	S. Oxford	Feb. 12th.
9	Beachville (Town Hall)	S. Oxford	Feb. 13th.
10	Ingersoll (Town Hall)	S. Oxford	Feb. 14th.
11	Springford (Town Hall)	S. Oxford	Feb. 15th.
12	Tilsonburg (Town Hall)	S. Oxford	Feb. 17th.
13	Brownsville (Methodist S. Room)	S. Oxford	Feb. 18th.
14	Fairground (Town Hall)	S. Norfolk	Feb. 19th.
15	Walsingham Centre (Town Hall)	S. Norfolk	Feb. 20th.
16	Simcoe (Library Hall)	N. & S. Norfolk	Feb. 21st and 22nd.
17	Port Dover (Town Hall)	S. Norfolk	Feb. 24th.
18	Nanticoke (Town Hall)	Haldimand	Feb. 25th.
19	Caledonia (Association Hall)	Haldimand	Feb. 26th.
20	Canfield (Grange Hall)	Haldimand	Feb. 27th.
21	South Cayuga (Drake's Hall)	Haldimand	Feb. 28th.
22	Dunnville (Town Hall)	Monck	Mar. 1st.
23	Wellandport (Misener's Hall)	Monck	Mar. 3rd.
24	Pelham Centre (Town Hall)	Monck	Mar. 4th.
25	Smithville (Agricultural Hall)	Monck	Mar. 5th.
26	Caistorville (Hall)	Monck	Mar. 6th.

DIVISION 4 B : Duncan Anderson, Rugby ; Robt. Thompson, St. Catharines.

1	Norval (Orange Hall)	Halton	Feb. 4th.
2	Drumquin (Township Hall)	Halton	Feb. 5th.
3	Postville (Township Hall)	Halton	Feb. 6th.
4	Appleby (Town Hall)	Halton	Feb. 7th.
5	Waterdown (Township Hall)	N. Wentworth	Feb. 8th.
6	Millgrove (Town Hall)	N. Wentworth	Feb. 10th.
7	Carlisle (Town Hall)	N. Wentworth	Feb. 11th.
8	Westover (Town Hall)	N. Wentworth	Feb. 12th.
9	Kirkwall (School House)	N. Wentworth	Feb. 13th.
10	Sheffield (Town Hall)	N. Wentworth	Feb. 14th.
11	Jerseyville (Palmer Hall)	S. Wentworth	Feb. 15th.
12	Carluke (School House)	S. Wentworth	Feb. 17th.
13	Glanford (Temperance Hall)	S. Wentworth	Feb. 18th.
14	Bartonville (Parish Hall)	S. Wentworth	Feb. 19th.

SUPPLEMENTARY MEETINGS.—*Con.*

15	Binbrook (Temperance Hall)	S. Wentworth	Feb 20th.
16	Tapleytown (Old Church)	S. Wentwor h	Feb. 21st.
17	Grimsby (Town Hall)	Lincoln	Feb. 22nd.
18	Beamsville (Town Hall)	Lincoln	Feb. 24th.
19	Jordan (Zimmerman's Hall)	Lincoln	Feb. 25th.
20	Grantham Township (Orange Hall)	Lincoln	Feb. 26th.
21	Niagara (Court House)	Lincoln	Feb. 27th.
22	Niagara Falls South (Town Hall)	Welland	Feb. 28th.
23	Willoughby (Town Hall)	Welland	Mar. 1st.
24	Allanburg (Town Hall)	Welland	Mar. 3rd.
25	Humberstone (Town Hall)	Welland	Mar. 4th.

DIVISION 5 : G. C. Caston, Craighurst ; F. C. Elford, Holmesville.

1	Onondaga (Township Hall)	N. Brant	Feb. 4th.
2	Moyle's School House	N. Brant	Feb. 5th.
3	Glenmorris (Township Hall)	N. Brant	Feb. 6th.
4	Branchton (Foresters' Hall)	S. Waterloo	Feb. 7th.
5	Ayr (McGeorge's Hall)	S. Waterloo	Feb. 8th.
6	New Dundee (Myer's Hall)	S. Waterloo	Feb. 10th.
7	Berlin (Old Church)	S. Waterloo	Feb. 11th.
8	Baden (Village Hall)	S. Waterloo	Feb. 12th.
9	Phillipsburg (Village Hall)	S. Waterloo	Feb. 13th.
10	Wellesley (Town Hall)	N. Waterloo	Feb. 14th.
11	St. Clements (Schneider's Hall)	N. Waterloo	Feb 15th.
12	Waterloo (Town Hall)	N Waterloo	Feb. 17th.
13	Winterbourne (Lecture Room)	N. Waterloo	Feb. 18th.
14	Elora (Village Hall)	C. Wellington	Feb. 19th.
15	Metz (Orange Hall)	C. Wellington	Feb. 20th.
16	Hillsburg (Village Hall)	C. Wellington	Feb 21st.
17	Grand Valley (Chattfield Hall)	E. Wellington	Feb. 22nd.
18	Arthur (Town Hall)	E. Wellington	Feb. 24th.
19	Kenilworth (Township Hall)	E. Wellington	Feb. 25th.
20	Mount Forest (Town Hall)	E. Wellington	Feb. 26th.
21	Palmerston (Town Hall)	W Wellington	Feb. 27th.
22	Rothsay (Temperance Hall)	W. Wellington	Feb. 28th.
23	Glenallen (Coot's Hall)	W. Wellington	Mar. 1st
24	Georgetown (Town Hall)	Halton	Mar. 3rd.
25	Burlington (Town Hall)	Halton	Mar. 4th.

DIVISION 6 : C. H. Black, Amherst, N.S.: F. M. Lewis, Burford ; Miss Alice Hollingworth, Beatrice.

1	Desboro (Township Hall)	N. Grey	Feb. 4th.
2	Kilsyth (Township Hall)	N. Grey	Feb. 5th.
3	Annan (Grange Hall)	N. Grey (aft)	Feb. 6th.
4	Leith (Public Hall)	N. Grey (eve)	Feb. 6th.
5	Bognor	N. Grey	Feb. 7th.
6	Walters Falls (Oddfellows' Hall)	C. Grey	Feb. 8th.
7	Kimberley (Union Hall)	C. Grey	Feb. 10th.
8	Ravenna (Township Hall)	C. Grey	Feb. 11th.
9	Maxwell (Orange Hall)	C. Grey	Feb. 12th
10	Relessy (Orange Hall)	Dufferin	Feb. 13th.
11	Laurel (Township Hall)	Dufferin	Feb 14th.
12	Horning's Mills (Workmen's Hall)	Dufferin	Feb. 15th.
13	Perm (Orange Hall)	Dufferin	Feb. 17th.
14	Collingwood (Court House)	W. Simcoe	Feb. 18th.
15	Duntroon (S. S. Hall)	W. Simcoe	Feb. 19th.
16	Singhampton	W. Simcoe	Feb. 20th.
17	Creemore (Leonard's Hall)	W. Simcoe	Feb. 21st.
18	Alliston (Town Hall)	S. Simcoe	Feb. 22nd.
19	Bond Head (Orange Hall)	S. Simcoe	Feb 24th.
20	Aurora (Town Hall)	N. York	Feb. 25th.
21	Queensville (Presbyterian Church)	N. York	Feb. 26th.
22	Mount Albert (Town Hall)	N. York	Feb. 27th.
23	Stouffville (Spoffard's Hall)	N. York	Feb. 28th.

SUPPLEMENTARY MEETINGS.—*Con.*

DIVISION 7 A: J. E. Orr, Fruitland; A. J. Reynolds, Scarboro J'c't; Miss Agnes Smith, Hamilton.

1	Bolton (Town Hall)	Peel	Jan. 7th
2	Palgrave (Shore's Hall)	Peel	Jan. 8th
3	Sandhill (Methodist Hall)	Peel	Jan. 9th
4	Charleston (Township Hall)	Peel	Jan. 10th
5	Alton (Science Hall)	Peel	Jan. 11th
6	Belfountain (Public Library)	Peel	Jan. 13th
7	Churchville (Templars' Hall)	Peel	Jan. 14th
8	Brampton (Concert Hall)	Peel	Jan. 15th
9	Malton (Templars' Hall)	Peel	Jan. 16th
10	Islington (Town Hall)	W. York	Jan. 17th
11	Thistletown (Rowntree's Hall)	W. York	Jan. 18th
12	Kleinburg (Temperance Hall)	W. York	Jan. 20th
13	Maple (Masonic Hall)	W. York	Jan. 21st
14	Thornhill (Hughes' Hall)	E York	Jan. 22nd
15	Unionville (Victoria Hall)	E. York	Jan. 23rd
16	Boxgrove (Foster' Hall)	E. York	Jan. 24th
17	Ellesmere (Curlers' Club.)	E. York	Jan. 25th
18	Goodwood (Town Hall)	N. Ontario	Jan. 27th
19	Uxbridge (Town Hall)	N. Ontario	Jan. 28th
20	Udora (Orange Hall)	N. Ontario	Jan. 29th
21	Beaverton (Alexandra Hall)	N. Ontario	Jan. 30th
22	Brechin (McGrath's Hall)	N. Ontario	Jan. 31st
23	Woodville (Woodville Hall)	W. Victoria	Feb. 1st
24	Little Britain (Little Britain Hall)	W. Victoria	Feb. 3rd

DIVISION 7 B: Henry Glendenning, Manilla; W. N. Hutt, Southend; Miss Laura Linton, Guelph.

1	Blackstock (Township Hall)	W. Durham	Jan. 7th
2	Solina (Sons of Temperance Hall)	W. Durham (aft)	Jan. 8th
3	Tyrone (Sons of Temperance Hall)	W. Durham (eve)	Jan. 8th
4	Kendal (Temperance Hall)	W. Durham (aft)	Jan. 9th
5	Orono (Town Hall)	W. Durham (eve)	Jan. 9th
6	Welcome (Temperance Hall)	E. Durham	Jan. 10th
7	Garden Hill (Orange Hall)	E. Durham	Jan. 11th
8	South Monaghan (Town Hall)	E. Durham	Jan. 13th
9	Lifford (Temperance Hall)	E. Durham	Jan. 14th
10	Omemee (Bradburn's Hall)	E. Victoria	Jan. 15th
11	Dunsford (Old Church)	E. Victoria	Jan. 16th
12	Cambray (Tomlin's Hall)	E. Victoria	Jan. 17th
13	Burnt River (Orange Hall)	E. Victoria	Jan. 18th
14	Seagrave (Town Hall)	S. Ontario	Jan. 20th
15	Columbus (Town Hall)	S. Ontario	Jan. 21st
16	Whitby (Town Hall)	S. Ontario	Jan. 22nd
17	Whitevale (Town Hall)	S. Ontario	Jan. 23rd

DIVISION 8: A. McNeill, Walkerville; Erland Lee, Stony Creek.

1	Lakehurst (Town Hall)	W. Peterboro (aft)	Jan. 7th
2	Hall's Bridge (School House)	W. Peterboro (eve)	Jan. 7th
3	Ennismore (Town Hall)	W. Peterboro	Jan. 8th
4	Stewart's Settlement (Union Hall)	W. Peterboro	Jan. 9th
5	Douro (St. Patrick's Hall)	E. Peterboro	Jan. 10th
6	Warsaw (Town Hall)	E. Peterboro	Jan. 11th
7	Havelock (Town Hall)	E. Peterboro	Jan. 13th
8	Westwood (Town Hall)	E. Peterboro	Jan. 14th
9	Hastings (Town Hall)	E. Northumberland	Jan. 15th
10	Menie (Lamb's Hall)	E. Northumberland	Jan. 16th
11	Wooler (Town Hall)	E. Northumberland	Jan. 17th
12	Castleton (Town Hall)	E. Northumberland	Jan. 18th
13	Centreton	W. Northumberland	Jan. 20th
14	Coldsprings (Township Hall)	W. Northumberland	Jan. 21st
15	Baltimore (Chapman's Hall)	W. Northumberland	Jan. 22nd
16	Consecon (Killip's Hall)	Prince Edward	Jan. 23rd

SUPPLEMENTARY MEETINGS.—*Con.*

17	Wellington (Town Hall)	Prince Edward	Jan. 24th.
18	Bloomfield (Town Hall)	Prince Edward	Jan. 25th.
19	Cherry Valley (Town Hall)	Prince Edward	Jan. 27th.
20	Milford (Town Hall)	Prince Edward	Jan. 28th.
21	Cressy (A. O. U. W. Hall)	Prince Edward (aft)	Jan. 29th.
22	Waupoos (Town Hall)	Prince Edward (eve)	Jan. 29th.

DIVISION 9A. Andrew Elliott, Galt; F. M. Lewis, Burford; Mrs. Elizabeth Torrance, Chateauguay Basin, Que.

1	Harder's (School House)	W. Hastings	Jan. 7th
2	Gilbert's (School House)	W. Hastings	Jan. 8th
3	Turner's (School House)	W. Hastings	Jan. 9th
4	Glen Ross (School House)	W. Hastings	Jan. 10th
5	Springbrook (Foresters' Hall)	N. Hastings	Jan. 11th
6	Marmora (Town Hall)	N. Hastings	Jan. 13th
7	Eldorado (Town Hall)	N. Hastings	Jan. 14th
8	Queensboro (Orange Hall)	N. Hastings	Jan 15th
9	Bogart (School House)	E. Hastings	Jan. 16th
10	Moira (Workmen's Hall)	N. Hastings	Jan. 17th
11	Foxboro (School House)	E. Hastings	Jan. 18th
12	Read (Hanley's Hall)	E. Hastings	Jan. 20th
13	Shannonville (A.O.U.W. Hall)	E. Hastings	Jan. 21st
14	Switzerville (School House)	Lennox	Jan. 22nd
15	Odessa (Town Hall)	Lennox	Jan. 23rd
16	Sillsville (Town Hall)	Lennox	Jan. 24th
17	Adolphustown (Town Hall)	Lennox	Jan. 25th
18	Emerald (Cheese Factory)	Amherst Island	Jan. 27th
19	Stella (Town Hall)	Amherst Island	Jan. 28th
20	Joyceville (Joyce's Hall)	Frontenac	Jan. 29th
21	Sydenham (Town Hall)	Frontenac	Jan. 30th
22	Enterprise (Merrill's Hall)	Addington	Jan. 31st
23	Tamworth (Town Hall)	Addington	Feb. 1st
24	Gananoque (Town Hall)	S. Leeds	Feb. 3rd
25	Seeley's Bay (Select Knights' Hall)	S. Leeds	Feb. 4th
26	Delta (Town Hall)	S. Leeds	Feb. 5th

DIVISION 9B. A. W. Peart, Burlington; John Gardhouse, Highfield.

1	Athens (H. S. Hall)	Brockville	Jan. 7th
2	Caintown (Presbyterian Church)	Brockville	Jan. 8th
3	Lyn (School Hall)	Brockville	Jan. 9th
4	New Dublin (Township Hall)	Brockville	Jan. 10th
5	Algonquin (Temperance Hall)	S. Grenville	Jan. 11th
6	Domville (Epworth Hall)	S. Grenville	Jan. 13th
7	Spencerville (Town Hall)	S. Grenville	Jan. 14th
8	Mainsville (School House)	S. Grenville	Jan. 15th
9	Moulinette	Cornwall	Jan. 16th
10	Cornwall Centre (Township Hall)	Cornwall	Jan. 17th
11	Martintown (St. Andrew's)	Glengarry	Jan. 18th
12	Lancaster (McRae's Hall)	Glengarry	Jan. 20th
13	North Lancaster (McDonald's Hall)	Glengarry	Jan. 21st
14	Monkland (Truax Hall)	Stormont	Jan. 22nd
15	Avonmore (Beaver Hall)	Stormont	Jan. 23rd
16	Newington	Stormont	Jan. 24th
17	Berwick (Town Hall)	Stormont	Jan. 25th
18	Inkerman (Workmen's Hall)	Dundas	Jan. 27th
19	Chesterville (Forester's Hall)	Dundas	Jan. 28th
20	Casselman (Town Hall)	Russell	Jan. 29th
21	Fournier (McGregor's Hall)	Prescott	Jan. 30th
22	Curran (School House)	Prescott	Jan. 31st
23	Billing's Bridge (Town Hall)	Russell	Feb. 1st

DIVISION 10. A. C. Hallman, New Dundee; R. H. Field, Addison.

1	Frankville (Brownbridge's Hall)	N. Leeds & N. Grenville	Jan. 7th
2	Easton's Corners (Warren's Hall)	N. Leeds & N. Grenville	Jan. 8th

SUPPLEMENTARY MEETINGS.—*Con.*

3	Bishop's Mills (Temperance Hall)	N. Leeds & N. Grenville	Jan. 9th
4	Millard's Corners (Orange Hall)	N. Leeds & N. Grenville	Jan. 10th
5	Burritt's Rapids (School House)	N. Leeds & N. Grenville	Jan. 11th
6	North Gower (Town Hall)	Carleton	Jan. 13th
7	Manotick (Harmony Hall)	Carleton	Jan. 14th
8	Burnstown (Temperance Hall)	S. Renfrew	Jan. 15th
9	Mount Patrick	S. Renfrew	Jan. 16th
10	Northcote (Temperance Hall)	S. Renfrew	Jan. 17th
11	Loch Winnoch (School House)	S. Renfrew	Jan. 18th
12	Golden Lake (School House)	N. Renfrew	Jan. 20th
13	Locksley (School House)	N. Renfrew	Jan. 21st
14	Pakenham (Agricultural Hall	N. Lanark	Jan. 22nd
15	Clayton (Forester's Hall)	N. Lanark (aft)	Jan. 23rd
16	Middleville (Town Hall)	N. Lanark (eve)	Jan. 23rd
17	Watson's Corners (Temperance Hall)	N. Lanark (aft)	Jan. 24th
18	McDonald's Corner's (Agricultural Hall)	N. Lanark (eve)	Jan. 24th
19	Lanark (Town Hall)	N. Lanark	Jan. 25th
20	Balderson (McGregor's Hall)	N. Lanark	Jan. 27th
21	Drummond (Township Hall)	N. Lanark	Jan. 28th
22	Gillies (School House)	N. Lanark	Jan. 29th

SPEAKER'S SUBJECTS.

Anderson, D. C., Rugby.—"Soil Cultivation," "Root Growing," "Management of Manure," "Cattle Raising," "Green Crops as Fertilizers," "The Bacon Hog."

Evening Subjects.—"Poultry on the Farm," "Advantages of Farm Life," "The Farm as a Financial Investment."

Black, C. H., Amherst, N.S.—"Breeding and Feeding for Beef," "The Dairy Cow and How to Care for Her," "Green Feeds to Supplement Pastures," "Rotation of Crops," "Clover Culture."

Campbell, Mrs Colin, Goderich.—"Aims and Objects of Women's Institutes," "Bread and Bread Making," "Canning and Preserving," "Household Economics," "Home Influence."

Caston, G. C., Craighurst.—"Problems of the Soil," "The Importance of Succulent Food in the Feeding of Live Stock," "Our Export Bacon Trade, How to Increase and Maintain it," "Orchard Fruits—the best Varieties and How to Grow Them," "Cold Storage and the Transportation and Marketing of our Perishable Products," "Picking, Packing and Shipping Apples to Home and Foreign Markets."

Evening Subjects.—"Horticulture on the Farm," "Poultry on the Farm," "The Agricultural College and the Education of the Farmer," "The Land we Live in."

Clark, J. W., Onondaga.—"Poultry Raising and Fattening for the English Markets," "Suitable Breeds and How to Select Them," "How to Manage an Incubator," "How to get a Large per cent. of Fertile Eggs," "Hog Raising," "How to Breed and Feed for the Export Trade," "Care of Sheep." "Management of Manure."

Evening Subjects.—"Destruction of Weeds," "Poultry Raising as an Occupation for Boys, Girls, and Women."

Cottrell, G. R., Milton.—"Poultry for Profit on the Ordinary Farm," "The Different Breeds of Poultry and Their Characteristics," "The Preparation of Poultry for Home and Foreign Market," "How to Build a Poultry House and Keep the Poultry Healthy."

Evening Subject —"Poultry Production for Boys and Girls."

Drummond, D., Myrtle.—"Bacon Hog and Pork Production," "Selection, Breeding, and Care of Dairy Cattle." "Cultivation of the Soil," "Corn for Silo, Varieties and Cultivation," "Notes on Chicken Feeding," "Summer Care of Dairy Cow, or Soiling."

Elford, F. C., Holmesville.—"Alfalfa as a Soiling Crop," "Summer Feeding of Hogs," "Fattening Chickens for the British Market."

Evening Subject —The Growing Lad for the Growing Country."

Elliott, Andrew, Galt.—"How to Maintain Fertility and Moisture in the Soil," "Corn and the Silo a Necessity," "Clover and Clover Hay," "Economical Feeding," "Improved Methods in Dairying Necessary to Success," "The Dairy Cow," "What we Gain by Keeping Sheep." "The Bacon Hog," "Concrete on the Farm."

Evening Subject.—"Our Farm Homes."

Fraser, W. S., Bradford.—"Hog Raising for Profit," "Corn as a Fodder Crop," "Care and Management of Sheep," "Clover Crop and How to Handle it," "Care of Implements," "Underdraining," "Beef Rings Among Farmers."

Evening Subjects.—"Farmers' Needs," "Farm Home," "The Home Dairy."

Field, R. H., Addison.—"Corn Growing and the Silo," "Care and Growth of the Dairy Cow," "Keeping Cows for Profit," "Silo Construction," "Raising Calves, and their care until three years old," "Profit in Hog Raising."

Evening Subjects.—"The P's and Q's of the Farm" "Farming My Choice."

Gardhouse, John, Highfield.—"Horse Breeding for Profit," "Care and Management of Horses," "How to Select and Feed Beef Cattle," "Care and Management of Sheep," "Raising Feed for Live Stock."

Evening Subjects.—"How to Improve Present Farm Conditions," "How to Interest the Young People in the Farm."

Gee, Myron A., Fisherville.—"Care of Sheep," "Hog Raising," "Poultry, Their Housing and Care," "Soil Cultivation," "Corn and Fodder Crops."

Evening Subjects.—"Poultry on the Farm," "Elements of Success," "Farm Problem."

Glendenning, Hy. Manilla.—"Cultivation of the Soil and Rotation of Crops," "Underdraining," "Weeds, and How to Destroy Them," "Grasses for Pasture," "The Growing of Red and Alsike Clover for Seed," "Breeding and Feeding of Hogs for Market," "Feeds and Feeding," "Poultry on the Farm."

Evening Subjects.—"The Farm Water Supply," "The Farmer's Fruit and Vegetable Garden." "Spraying for Insects and Fungous Diseases."

Graham, W. R., Guelph.—"Poultry for Profit," "How to Properly Kill, Pluck, and Otherwise Prepare Poultry for Export," "How to Get Eggs in Winter," "Hatching and Rearing Chickens Naturally and Artificially."

Evening Subject.—"Canada's Opportunity in the Poultry Markets of the World."

Hallman, A. C., New Dundee.—"Breeding and Care of the Dairy Herd" (Illustrated), "Useful Hints on the Swine Industry" (Illustrated), "Cultivation of Fodder Corn and the Silo," "Catch Crops," "Cultivation of the Soil and Clover," "Root Culture," "Water Supply on the Farm and the Value of Indoor Watering System," "The Farmer's Fruit Garden," "The Cream Separator and Butter Making on the Farm."

Harcourt, R., B. S. A., Guelph.—"Economical Cattle Feeding," "Soil Moisture in Relation to Plant Growth," "Soiling and Soiling Crops," "Milk Production," "The Care and Handling of Milk for Creameries and Cheese Factories," "Flour and Bread Making"

Hollingworth, Miss A. Beatrice.—"Butter Making," "The Weed Question," "What Women Have Done, and Can Do," "The Importance of Good Housekeeping," "Healthy Homes," "Our Friends the Flowers."

Hutt, W. N., Southend.—"Pruning the Orchard," "Spraying Mixtures and Their Application," "Injurious and Beneficial Insects," "Management of the Farmer's Wood Lot," "Crop Failures and How to Avoid Them," "Seeds, Seed Grain and Seeding," "Birds in Relation to Agriculture," "Beautifying the Home"

Kinney, Mrs. A., Grandview.—"Home-made Bread and Butter," "Our Women's Institutes."

Evening Subjects.—"The Cheerful Life on the Farm, Social and Domestic," "Evening at the Homestead."

Lee, Erland, Stoney Creek.—"Lessening the Injurious Effects of Dry Weather on Our Crops," "Breeding and Feeding the Dairy Herd," "Corn and the Silo," "Care of Milk for Cheese Factory or Creamery," "Cream Separator and Butter Making on the Farm," "The Use of Farmers' and Women's Institutes."

Lewis, F. M., Burford.—"The Orchard and Its Care." "Soil Moisture and How to Retain It," "Manures, Barnyard and Green, and Their Application." "The Farmer's Garden," "The Farm Home."

Lick, Elmer, Oshawa.—"The Handling and Marketing of Fruit," "Fruit Growing from a Commercial Standpoint."

Linton, Miss Laura, Guelph.—"Principles of Cooking," (with simple demonstration), "Our Daily Bread," "Dairying on the Farm," "The Comfortable Home"

McAllister, Helen C., Coventry.—"Private Dairy Butter Making," "Practical Hints on Cheese Making at Home," "The Work Taken Up in a Course at the O. A. C. Dairy School," "The Farmer's Fruit and Vegetable Garden," "Winter Window Gardening for the Amateur," "The Importance of Organization for Farmers' Wives and Daughters," "Home Influence."

McCulloch, R., Snelgrove.—'Dairy Farming and Its Relation to Soil Fertility." "Improving Our Dairy Herds," "Cow Foods, Their Composition and Effect on Butter Flavor" (Illustrated), "Milk and Cream for City Trade."

Evening Subjects.—"Farm Houses," "The Prosperity of our Country Depends on the Prosperity of the Farmer."

McEwing, Jas., Drayton.—"Farm Drainage," "How to Maintain Fertility of the Soil," "Mistakes Made in Farming," "Soil Cultivation and Rotation of Crops."

Evening Subjects.—"Some Things Boys Should be Taught,' "The Gospel of Home Influence," "The Farmer as a Factor in National Progress."

McNeill, A., Walkerville.—"The Fruit Marks Act, Its Effect on Foreign and Domestic Trade," "Export Trade in Apples and Pears." "Spraying for Insect and Fungous Diseases,'

"Apple Culture," "Cold Storage Buildings and Fruit Houses," "Modern Methods in Fruit Growing," "Packing and Shipping Fruit."

Evening Subjects.—"Light and Shades of Farm Life," "Fruits and Flowers on the Farm," "Some Social Problems," "How to Get the Most Out of the Farm."

MADDOCK, Miss BLANCHE, Guelph.—"Domestic Science," "Dairying," "Bread Making," "Bacteria," "Women's Institutes," "Mission of Flowers and How to Grow Them."

MASON T. H., Strafford ville.—"The Hog as a Money Maker," "Sheep Raising," "Care and Food of Dairy Cattle," "Corn Growing for Grain and Silage," "Butter Making."

Evening Subjects.—"Changing Conditions in Canadian Agriculture," "Poultry Raising for the Boys and Girls."

MEYER, J. E., Kossuth. "Keeping Poultry for Profit on the Farm, "Raising Poultry for the Market," "Different Varieties of Poultry and their Characteristics," "How I Built my Silo," "Experinces with Rape as a Forage Plant," "How I Endeavor to utilize every foot of land on my Farm."

MOORE, CHAS. S., Stanbridge East, Que.—"Feeding Dairy Cows so as to produce the Greatest Profit for Food Consumed," "Cultivation of the Soil," "Care and Application of Farm Manures."

Evening Subject.—"A Study of the Clovers and their Relatives."

MORDEN, E., Niagara Falls.—"The Farmer's Fruit Garden," "How to Grow Small Fruits," "Best Varieties of Fruits," "Some of the Newer Fruits," "Insects Injurious to Fruits," "Japan Plums," "The New Currant Culture," "The Road Problem," "How to Beautify the Farm," "The Chemistry of Every-day life."

NASH, C.W., Toronto.—"Chemistry of the Soil," "How Plants Grow." "Evolution of Domestic Animals," "The Value of our Birds," "The Enemies of the Wheat Plant," "Our Insect Pests," "Nature about the Farm," "The Enemies of the Pea Crop and How to deal with Them."

ORR, J. E., Fruitland—"Notes on Plum Culture," "A Practical Talk on Spraying," "Some Insect Enemies the Orchardist has to fight," "The Latest Ideas in Controlling the Codling Moth," "The San Jose Scale and Some Other Scale Insects," The Care of Fruit Trees," "A Few of the more Common Diseases of Fruit Trees, their Preventives and Remedies."

PEART, A. W., Burlington.—"Apples, Pear, Plums, Grapes, Blackberries, Raspberries, Currants, their Varieties, Cultivation, Marketing, etc.," "Insects and Fungi Injurious to our Orchards and Methods of Combatting Them," "Underdraining," "Management of Soils," "The Application of Fertiizers."

Evening Subjects.—"Agricultural Education," "Leaks on the Farm."

QUINN, M. J., Toronto, 107 Gladstone Ave.—"House Heating, Ventilation and Sanitation," "Simple Methods of Disposing of Household Wastes, Including Sewage and Garbage," "Simple Methods of Cold Storage Construction."

RAYNOR, T. G., Rose Hall.—"Stock Improvement," "The Value of Foods," (Illustrated), "Soiling Stock," "Selection and Management of Dairy Cow," "Some Common Diseases Affecting Stock," "Apple Culture," "Modern Methods of Soil Cultivation," "How to Feed the Soil," "Clover and Corn," "The Bacon Hog." "Concrete and its Use."

Evening Subjects.—"Some Common Mistakes in Farming," "Agricultural Education," "Agricultural Development."

REED, HENRY G., V.S., Georgetown.—"The Influence of the Natural Laws on the Breeding of Live Stock," "Ordinary Diseases of the Stomach of Cattle,' "Horse Breeding for Profit," "Diseases Incident to Newly Calved Cows and Preventive Treatment." "Care of the Brood Mare and her Foal," "The Horse's Feet in Health and Disease." "The Horse in Peace and War."

REYNOLDS, A. J., Scarboro Junction.—"Objects and Methods of Cultivation," "Corn and Silo," "Summer and Winter Dairying" "Clover Growing" "Application of Manure," "Some of the Essentials for a Successful Institute."

ROSE, Miss LAURA, Guelph.—"Science in Butter Making," "Food Value of Milk, Butter and Cheese." "Milk, its Secretion. Composition and Management," "Difficulties in Dairy Farming and How to Overcome them." "The Making of Bread and Buns," "A Chat with Housekeepers on Housekeeping," "One Eye in the Field, the Other in the Town," "As Others See Us," "A Three Months' Drive Through Cape Breton."

SHEPPARD, F. A., Queenston.—"Propagation of Fruits, Grafting, Budding, etc.," "Small Fruits, Varieties and Cultivation," "Planting and Care of Orchards," "Tomato Growing for Early Market and Factory," "Packing and Transportation of Fruit." "Cultivation and Conservation of Soil Moisture," "The Use of Concrete for Farm Buildings."

Evening Subjects.—"The Codling Moth and its Effect on the Apple Crop" "Birds in Relation to Agriculture and Horticulture," "The Advantages of Farm Bookkeeping, and some Methods of Keeping Them." (Illustrated).

SHEPPARD, MAJOR JAMES, Queenston.—"The Packing and Sale of Apples," "Planting and Care of Orchards," "Four Reasons Why We Till the Soil," "Forty Years' Experience in Growing Corn," "Tomatoes for Home and Market," Ensilage and the Round Silo," "The Export Bacon Trade."

Evening Subjects.—"Propagating Fruits, Grafting, Budding, etc." "Three Historical Days On the Niagara River."

SHERRINGTON, A. E., Walkerton.—"The Care and Management of the Orchard,—Planting, Cultivating and Pruning." "Small Fruits for the Farmers' Garden and how to grow them," "Picking, Packing and Marketing of Fruit," "Spraying for Insects and Fungous Diseases," "Tomato Growing for Home and Market," "Soil Cultivation," "Breeding and Feeding of Poultry," "Poultry for the Home and British Market."

Evening Subject.—"Beautifying the Farm."

SLEIGHTHOLM, F. J., Strathroy.—"Creamery Skimmilk as a Stock Food," "How to Rear Profitable Milkers," "Two Year's Record of a Common Cow," "Summer Feeding of Milch Cows," "Difficulties in Farm Butter Making and How to Overcome them."

Evening Subject.—"Training Boys for Business."

SMITH, MISS AGNES, Hamilton.—"Principles of Cooking (with simple demonstrations)," "Food in its Relation to the Body," "Domestic Science," "The Sanitary Home."

SMITH, MRS. J. L, Whitby.—"A Practical Talk to Our Young People." "The Young Man on the Farm, His Advantages and Disadvantages," "The Days and Ways of our Grandmothers," "Economy in the Home," "Food and Diet" "Woman's Life and Work on the Farm," "Helpful Hints to Young Housekeepers."

SMITH, J. H., Ridgetown.—"Farm Mechanics." "The Sun at Work on a Hundred-acre Farm," "Relation of Soil and Plant," "Scientific Agriculture or the Relation of Science to Farming," "Farmers' Education," "Farm Bookkeeping," "Canada for Canadians," "The Choice of a Profession."

STEVENSON, R. S., Ancaster—"Breeding and Selection of Dairy Cows," "Feeding the Dairy Cow Economically," "Corn Growing and Ensilage," "The Cream Separator," "The Breeding and Feeding of Beef Cattle," "Farmers and Farm Life."

THOMPSON, R.—St. Catharines—"Poultry for Profit," "Swine Breeding and the Export Bacon Trade," "Pointers for Growing Corn for Grain and the Silo," "Small Fruits and Fruit Trees," "Gathering and Marketing Fruit," "Cold Storage for the Farmer," "Underdraining," "The San Jose Scale and Other Orchard Pests," "The future Farmer and his Education."

TOMPKINS, W. S., Grandview, N. B.—"Cultivation of the Soil and Rotation of Crops," "Conservation of Soil Moisture," "Benefits of Farmers' Institutes," "Mixed Husbandry—its Advantages" "Mistakes made in Farming," "Care of Manure and How to Apply it," "Cheap Foods and how to Feed them," "Mistakes in Sheep Breeding," "Leaks on the Farm," "Raising Hogs for Market."

TORRANCE MRS. ELIZABETH M., Chateauguay Basin, Que.—"A Talk on Apples, Tree and Fruit" "Housekeeping as a Business," "Vegetables, and the Place They Should Hold on Our Table," "Our Summer Fruits," "Eggs, Their Use and Abuse," "The Object of a True Education."

TWISS, R., Woodburn.—"Raising Pigs for Profit," "The Dairy Cow, and How to Care for Her," "Corn Growing and the Silo," "Why I am a Member of The Farmers' Institute," "Life is as You Make It," "Young Man, Stick to the Farm."

ZAVITZ, C.A., B.S.A., Guelph.—1. A Half-dozen Five-minute Talks on Subjects relating to Field Agriculture. (The subjects to be suggested by the members at the meeting.) 2. Results and Conclusions from Agricultural Experiments conducted throughout Ontario in 1901. 3. Pasture Crops. 4. The Selection of Seed in its Relation to Good Farming. 5. Results of Several Years' Experience in Growing the Following Crops: Grass Peas, Egyptian Peas, Cow Peas, Soy Beans, Hairy Vetches, Crimson Clover, Lucerne and Dwarf Essex Rape. 6. The Leading Varieties of Grain Crops for the Farmers of Ontario. 7. Important Results of Practical Experiments in Growing Potatoes.

Evening Subject.—The Ontario Agricultural College in its Relation to the Agriculture of the Province.

LIST OF RESERVE SPEAKERS.

The following is a list of reserved delegates whose services may be obtained by local Institutes at the time indicated after each name, and on the following terms: The legitimate expenses of the delegate must be borne by the Institute employing him or her from the time he or she leaves home until he or she returns thereto, together with a per diem of $2.50 for the time the person is absent from home, Sunday excepted:

Caston, G. C., an occasional meeting in December.
Clark, J. W., February.
Cottrell, G. R., February.
Elford, F. C., January.
Fraser, W. S., February.
Graham, W. R., an occasional meeting in December and January.
Gee, Myron A., December and February.

RESERVE SPEAKERS—*Continued.*

Hallman, A. C., February.
Hutt, W. N., December.
Lee, Erland, February.
Lick, Elmer, February.
McEwing, Jas., February.
Meyer, J. E., February.
Moore, C. S., January and February.
Morden, E., any time.
Quinn, M. J., any time.
Sheppard, F. A., December and after February 10th.
A. E. Sherrington, Walkerton.
Smith, J. H., any time.
Thompson, Robt., December and January.
Twiss, R., January and February.

LADY DELEGATES.

Campbell, Mrs. Colin, December and February.
Hollingworth, Miss Alice, December and January.
Kinney, Mrs. A., January.
Linton, Miss Laura, February.
McAllister, Miss Helen, December and January.
Smith, Miss Agnes, December and February.
Smith, Mrs. J. L., any time.
Torrance, Mrs. Elizabeth, December and February.

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Oxford, S.—President, W. J. Whaley, Dereham Centre; Vice-President, S. J. Mason, Norwich; Vice-President, John McKee, Norwich.

Parry Sound, E.—President, John Duke, Hartfell; Vice-President, W. H. Silvester, Burk's Falls; Secretary-Treasurer, Thos. Bottomby, South River.

Parry Sound, W.—President, W. H. Burns, Orrville; Vice-President, Chas. Sarney, Parry Sound; Secretary-Treasurer, James S. Miller, Parry Harbor.

Peel.—President, R. J. McGregor, Inglewood; Vice-President, D. J. McClure, Churchville; Secretary-Treasurer, R. McCulloch, Snelgrove.

Perth, N.—President, D. A. Dempsey, Stratford; Vice-President, Jacob Bray, Listowel; Secretary-Treasurer, S. H. Pugh, Milverton

Perth, S.—President, Jas. A. Donald, St. Marys; Vice-President, John Arbrogast, Sebringville; Secretary-Treasurer, P. S. Armstrong, St Marys.

Peterboro, E.—President, F. Birdsall, Birdsall; Vice-President, E. Hawthorne, Warsaw; Secretary-Treasurer, Chas. O'Reilly, Norwood.

Peterboro, W.—President, E. M. Elliott, Peterboro; Vice-President, R. Q. Dench, Lakefield; Secretary-Treasurer, Wm. Collins, Box 926, Peterboro.

Prescott.—President, Jonathan Cross, Caledonia Springs; Vice-President, J. T. Higginson, Hawkesbury; Secretary-Treasurer, Wm. Macadam, Vankleek Hill.

Prince Edward.—President, G. N. Rose, Waupoos; Vice-President, J. E. Glenn, Ameliasburg; Secretary-Treasurer, A. S. Yarwood, Picton.

Renfrew, N.—President, O. Wright, Beachburg; Vice-President, James Daughtery, Beachburg; Secretary-Treasurer, John Brown, Beachburg.

Renfrew, S.—President, James O'Connor, Renfrew; Vice-President, D. Barr, sr., Renfrew; Secretary-Treasurer, G. McIntyre, Renfrew.

Russell President, W. C. Edwards, M. P., Rockland; Vice-President, D. McDonald, Russell; 2nd Vice-President, R. S. McTavish, Vernon; Secretary-Treasurer, W. R. Craig, Russell.

Simcoe, C.—President, Wm. Pratt, Penetang; Vice-President, Wm. Taylor, Barrie; Secretary-Treasurer, G. C. Caston, Craighurst.

Simcoe, E.—President, D. M. Harvie, Orillia; Vice-President, Geo. Raikes, Barrie; Secretary-Treasurer, R. A. Lehmann, Orillia.

Simcoe, S.—President, W. C. Henry, Thornton; Vice-President, J. S. Duff, Cookstown; 2nd Vice-President, H. Grose, Lefroy; Secretary-Treasurer, E. Jeffs, Bond Head.

Simcoe, W.—President, F. E. Webster, Creemore; Vice-President, James Carlton, Avening; 2nd Vice-President, John Smith, Duntroon; Secretary-Treasurer, Jno. McKee, Duntroon.

Stormont.—President, James Begg, Gravel Hill; Vice-President, James Martin, Newington; Secretary-Treasurer, C. W. Young, Cornwall.

St. Joseph's Island.—President, Alfred Kitchen, Carterton; Vice-President, Chas. Young, Richard's Landing; Secretary-Treasurer, A. F. Eddy, Marksville.

Victoria, E.—President, W. H. Cullis, Powle's Corners; Vice-President, Isaac Fee, Omemee; Secretary-Treasurer, Wm. Thurston, Bobcaygeon.

Victoria, W.—President, Wm. Channon, Oakwood; Vice-President, Donald Jackson, Woodville, Secretary-Treasurer, James Keith, Lindsay.

Waterloo, N.—President, J. G. Hurst, Conestogo; Vice-President, G. F. Lackner, Hawkesville; Secretary-Treasurer, Allen Shantz, Waterloo.

Waterloo, S.—President, R. H. Knowles, Hespeler ; Vice-President, T. C. Douglas, Galt ; 2nd Vice-President, Josiah Hallman, Washington ; 3rd Vice-President, J. D. Newsteadt, Preston ; Secretary-Treasurer, Andrew Chisholm, Galt ; Assistant-Secretary, C. D. Brown, Haysville.

Welland.—President, John McLeod, Ridgeway ; Vice-President, F. A. Hutt, Southend ; Secretary-Treasurer, W. H. Gainer, Welland.

Wellington, C.—President, R. D. Nodwell, Hillsburg ; Vice-President, Geo. Wright, Elora ; Secretary-Treasurer, James Kirkwood, Ospringe.

Wellington, E.—President, William H. Mallett, Teviotdale ; Vice-President, Samuel Waters, Kenilworth ; Secretary-Treasurer, Albert Hellyer, Kenilworth.

Wellington, S.—President, William McCrae, Guelph ; Vice-President, W. W. Kenny, Guelph ; 2nd Vice-President, Peter Iles, Arkell ; Secretary-Treasurer, W. W. Buchanan, Gourock.

Wellington, W.—President, Fred. Wetzel, Moorefield ; Vice-President, Geo. Wilson, Drayton ; Secretary-Treasurer, James McEwing, Drayton.

Union (Branch West Wellington).—President, Alex. Drummond, Clifford ; Vice-President, Robt. Wallace, Lakelet ; Secretary-Treasurer, John Munro, Clifford.

Wentworth, N.—President, James Nicholson, Kirkwall ; Vice-President, Ernest Tufgar, Millgrove ; 2nd Vice-President, John B. P. Robertson, Strabane ; Secretary-Treasurer, Joseph Stephenson, Freelton.

Wentworth, S.—President, J. B. Calder, Carluke ; Vice-President, R. Twiss, Woodburn; Secretary-Treasurer, Erland Lee, Stoney Creek.

York, E.—President, L. E. Annis, Scarboro ; Vice-President, T. Pilkey, Wexford ; 2nd Vice-President, D. James, Langstaff ; 3rd Vice-President, James A. Young, Mongolia ; Secretary-Treasurer, A. J. Reynolds, Scarboro Junction.

York, N.—President, J. A. Hopkins, Holt ; Vice-President, F. W. Heacock, Kettleby ; Secretary-Treasurer, R. W. Phillips, Aurora.

York, W.—President, Isaac Kellan, Humber ; Vice-President, A. Snider, Elia ; Secretary Treasurer, R. L. Crawford, Emery.

STATISTICS.

REPORTS OF LOCAL

Institute district.	Membership, December, 1900.	Membership to June, 1901.	No. of Meetings held.	Total attendance.	No. of papers read or addresses delivered.	Receipts. Cash on hand per last Report.	Members' fees.	Donations.	Grants.	Receipts from conventions.	Receipts from excursions.
						$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Addington	71	78	5	711	23	17 11	19 50		50 00		
Algoma Centre	80	92	4	253	11	22 67	24 50		50 00		
(Slate River Valley).		13									
Algoma, East	139	128	7	523	23	30 46	32 00		25 00	4 00	
Amherst Island	58	44	3	370	4	48 23	11 00		50 00		
Brant, North	129	73	6	606	22	33	28 75		50 00		
Brant, South	84	87	5	950	24	39 58	22 25		50 00		100 55
Brockville	227	189	9	1,575	28	15 11	47 75	8 20	50 00		
Bruce, Centre	159	140	8	800	14	167 19	34 75		50 00		89 36
Bruce, North	104	172	6	487	10	101 57	46 75		50 00		106 50
Bruce, South	203	219	7	5,110	48	250 04	45 75		50 00		86 94
Bruce, West	211	283	8	2,915	28	113 45	70 50		50 00		114 50
Carleton	150	79	5	805	15	47 50	37 50		50 00		
Cornwall	81	59	6	495	15	71	12 75		50 00		
Dufferin	277	291	7	892	44	224 47	67 75		50 00		202 00
Dundas	201	239	5	1,857	30	181 04	59 00		49 75		
Durham, East	173	151	7	955	22	65 37	37 50		50 00		25 00
Durham, West	180	198	14	947	32	113 46	49 25		50 00		5 00
Elgin, East	221	254	7	755	18	47 03	70 00		50 00		
Elgin, West	179	182	7	840	34	22 40	42 50		50 00		
Essex, North	80	97	7	675	33		25 00		50 00		
Essex, South	199	208	9	1,355	50	92 14	52 75		50 00		
Frontenac	142	110	5	1,255	26	71 22	23 50		50 00		
Glengarry	216	173	5	1,535	12		44 25		50 00		
Grenville, South	100	131	5	1,213	18	60 10	31 75		50 00		
Grey, Centre	160	157	7	663	33	43 15	39 75		50 00		
Grey, North	232	242	10	1,290	41	88 00	60 25		50 00		
Grey, South	227	270	7	2,250	25	196 84	70 25		50 00	10 35	184 00
Haldimand	339	361	12	1,660	56	417 81	88 00		50 00		
Halton	502	748	14	5,490	58	196 84	188 25		75 00		121 20
Hastings, East	127	138	7	1,275	39	2 63	32 75	45 00	50 00		
Hastings, North	535	578	22	2 781	86		142 50		75 00		
Hastings, West	128	118	6	1,335	27	29 91	30 00		50 00		
Huron, East	229	357	8	1,383	49	51 59	88 25		50 00		
Huron, South	132	287	8	2,275	27	286 38	58 25		50 00	27 85	
Huron, West	330	363	11	3,260	60	24 59	93 75		50 00		215 00
Kent, East	210	222	7	930	41	20 33	53 50		50 00		
Kent, West	138	210	9	1,097	25	88 95	52 75		75 00		
Lambton, East	185	203	7	912	50	48 33	51 50		50 00		65 32
Lambton, West	315	401	9	1,067	62	41 59	91 75		50 00		74 65
Lanark, North	373	339	9	2,721	52	46 54	85 00		65 00	35 90	
Lanark, South	115	174	5	1,100	31		43 00		65 00		
Leeds, N. & Grenville, N	151	137	8	1,080	19	54 22	34 25		50 00		41 45
Leeds, South	271	198	7	2,020	45		53 50		50 00		
Lennox	110	122	6	620	25	65 97	30 75		75 00		
Lincoln	220	270	7	1,595	38	59 47	51 50		55 00		28 00
Manitoulin, East	150	157	7	1,230	12	78 05	38 75		25 00		
Middlesex, East	283	284	9	1,995	54	113 47	81 00		50 00		108 70
Middlesex, North	340	367	12	2,545	65	357 64	91 25		25 00		
Middlesex, West	167	200	7	800	30	65 36	49 50		50 00		
Monck	149	204	8	1,054	30	38 28	50 00		55 00		
Muskoka, Centre	51	51	4	277	10	44 10	12 50		25 00		
Pt. Carling and Bala	21	19	4	167	11		4 75				
Muskoka, North	207	195	7	556	49	7 44	51 75		25 00		
Muskoka, South	103	110	5	264	19	35 94	26 00		45 00		
Nipissing, W	70	70	5	156	8		17 50		25 00		
Nortolk, North	322	375	8	3,790	46	47 52	92 25	15 00	50 00		

FARMERS' INSTITUTES.

Receipts.			Expenditure.													
Miscellaneous.	Balance due Treasurer.	Total receipts.	Due Treasurer per last Report.	Expense for meetings.	Secretary's salary, etc.	Postage and stationery.	Printing.	Advertising.	Lecturers' expenses.	Lecturers' allowance.	Periodicals for members.	Miscellaneous.	Balance on hand.	Total.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
.....	.....	86 61	.....	16 00	20 00	6 94	8 00	1 00	.....	11 60	.....	.....	23 07	86 61
.....	.....	97 17	.....	6 00	18 00	5 96	17 00	2 30	.....	.....	.....	.....	47 91	97 17
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	91 46	.....	7 50	28 00	2 22	1 50	1 50	10 25	.....	.....	13 65	26 84	91 46
50	.....	109 73	.....	15 00	5 00	1 63	7 01	.....	.....	.....	.....	10 00	71 09	109 73
.....	.....	79 08	.....	40 75	10 00	1 25	9 00	.....	14 36	.....	.....	.....	3 72	79 08
.....	.....	212 38	.....	38 49	25 00	2 91	5 50	2 00	11 04	.....	.....	37 10	90 34	212 38
.....	.....	121 06	.....	6 00	20 00	3 53	14 75	9 80	23 10	.....	.....	37 10	6 78	121 06
.....	.....	341 30	.....	60 80	25 00	5 30	40 17	.....	10 50	.....	.....	11 75	187 78	341 30
21 63	.....	326 45	.....	50	12 45	6 13	13 00	30	.....	.....	100 00	12 25	181 82	326 45
.....	.....	432 73	.....	12 00	57 90	19 38	30 00	9 65	17 95	.....	.....	23 25	262 60	432 73
1 00	.....	349 45	.....	.....	35 00	7 10	27 50	8 75	20 50	5 00	47 50	69 41	128 69	349 45
.....	.....	135 00	.....	7 53	25 00	10 15	12 25	.....	.....	.....	.....	31 00	49 07	135 00
.....	1 74	65 20	.....	15 00	29 00	2 50	10 00	.....	8 70	.....	.....	.....	.....	65 20
16 60	.....	560 82	.....	.....	42 00	5 50	11 75	38 00	.....	.....	25 00	182 51	256 06	560 82
6 56	.....	296 35	.....	20 00	30 00	4 65	1 00	32 00	12 30	.....	.....	20	196 20	296 35
.....	.....	177 87	.....	41 60	25 00	10 50	24 75	.....	.....	.....	.....	5 00	71 02	177 87
.....	2 60	220 31	.....	12 25	32 00	.....	43 35	.....	23 14	.....	.....	27 39	82 18	220 31
1 79	.....	168 82	.....	16 50	20 00	1 20	14 85	6 00	.....	13 21	.....	7 25	89 81	168 82
.....	.....	114 90	.....	7 75	25 00	16 36	22 25	4 00	11 40	.....	.....	1 25	26 89	114 90
.....	11 63	86 63	32 13	9 25	15 00	.....	6 00	8 00	.....	21 65	.....	.....	.....	86 63
3 07	.....	197 96	.....	7 50	59 15	4 50	19 40	.....	28 08	10 00	.....	10 25	59 08	197 96
.....	.....	144 72	.....	9 50	20 00	3 60	14 00	20 50	4 14	.....	.....	5 00	* 67 98	144 72
.....	55 10	149 35	82 35	24 00	25 00	2 00	.....	5 00	.....	11 00	.....	.....	.....	149 35
.....	.....	141 85	.....	10 50	20 00	7 85	18 50	.....	14 35	.....	.....	6 50	64 15	141 85
.....	.....	132 90	.....	39 85	25 20	5 44	17 50	3 50	.....	.....	.....	4 25	37 16	132 90
.....	.....	198 25	.....	29 95	33 50	13 75	12 00	13 50	.....	.....	12 10	7 11	76 34	198 25
32 60	.....	544 04	.....	51 75	72 70	5 78	13 75	5 25	8 49	.....	47 65	24 95	313 72	544 04
49 50	..	605 31	.....	48 00	89 50	42 54	56 84	.....	30 52	.....	.....	30 75	307 16	605 31
.....	.....	581 29	.....	106 45	65 00	10 72	77 05	.....	35 56	.....	85 25	54 63	146 64	581 29
.....	.....	130 38	.....	8 00	25 00	18 46	22 25	.....	23 75	.....	.....	4 35	28 57	130 38
.....	.....	217 50	35 46	25 45	61 00	5 57	26 00	1 00	62 50	.....	.....	50	02	217 50
.....	.. .	109 91	.....	38 00	30 00	4 00	15 55	50	10 10	.....	.....	.....	11 76	109 91
.....	.....	189 84	.....	39 75	22 50	10 39	17 50	4 00	.....	.....	.....	10 20	85 50	189 84
.....	.....	422 48	.....	69 15	43 50	3 57	11 77	31 49	78 80	.....	.....	32 01	152 19	422 48
.....	.....	383 34	.....	67 80	60 70	18 25	24 00	13 00	52 10	.....	.....	10 40	137 09	383 34
.....	.....	123 83	.....	19 00	20 00	19 75	14 50	3 00	18 65	.....	.....	11 50	17 43	123 83
.....	.....	216 70	.....	34 80	32 17	6 50	6 25	2 24	28 63	.....	.....	10 00	96 11	216 70
.....	.....	215 15	.....	38 10	10 00	6 70	9 00	3 00	25 70	.....	.....	3 50	119 15	215 15
8 00	.....	265 99	.....	55 05	32 15	2 50	24 45	1 50	10 50	.....	.....	12 73	127 11	265 99
..	.....	232 44	.....	89 55	34 70	2 02	55 55	.....	34 25	.....	.....	.....	16 37	232 44
..	7 89	115 89	15 49	16 15	25 00	1 30	14 25	24 70	15 00	4 00	.....	.....	.....	115 89
2 50	.....	182 42	.....	20 85	10 00	2 50	24 25	8 00	.....	.....	.....	116 05	77	182 42
.....	3 76	107 26	4 75	39 45	15 00	2 45	14 25	.....	11 71	.....	.....	19 65	.....	107 26
.....	.....	171 72	.....	90 47	15 00	2 79	16 47	.....	.....	.....	.....	.....	46 99	171 72
.....	.....	193 97	.....	1 00	30 00	7 42	13 25	12 00	5 15	.....	.....	11 00	114 15	193 97
.....	.....	141 80	.....	1 00	12 00	2 25	9 60	.....	28 55	.....	.....	22 60	65 80	141 80
4 86	.....	358 03	.....	50 25	37 60	14 80	28 50	20 44	5 10	.....	9 40	19 78	172 16	358 03
16 43	.....	490 32	.....	19 25	44 90	6 30	18 65	.....	25 30	.....	.....	.....	375 92	490 32
.....	.....	164 86	.....	27 80	36 00	3 43	8 29	.....	17 85	.....	.....	10 65	60 84	164 86
.....	.....	143 28	.....	23 15	27 00	9 25	12 00	13 61	23 40	.....	.....	8 75	26 12	143 28
.....	.....	81 60	.....	6 50	11 00	3 85	5 25	2 50	.....	.....	.....	15 00	37 50	81 60
.....	1 76	6 51	1 51	.....	2 75	2 25	.....	.....	.....	.....	.....	.....	.....	6 51
.....	6 46	90 65	.....	30 62	29 35	2 48	7 75	2 00	.....	.....	.....	18 45	.....	90 65
5 00	..	111 94	.....	11 90	15 00	4 66	7 75	.....	.....	.....	.....	.....	72 63	111 94
.....	.....	42 50	.....	3 03	10 10	2 00	10 00	.....	.....	.....	.....	1 00	16 37	42 50
.....	.....	204 77	.....	41 40	50 00	10 57	18 75	.....	20 38	.....	.....	20 00	43 67	204 77

REPORTS OF LOCAL

Institute District.	Membership, December, 1900.	Membership to June, 1901.	No. of meetings held.	Total attendance.	No. of papers read or addresses delivered.	Recipts.					
						Cash on hand per last report.	Members' fees.	Donations.	Grants.	Receipts from conventions.	Receipts from excursions.
						$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Norfolk, South	292	216	5	673	12	.....	53 50	.....	50 00	.	.
Northumberland, East	137	303	7	2,580	50	55 23	75 25	.....	50 00	73 45	.....
Northumberland, West	95	110	8	1,425	34	47 50	27 75	.....	50 00	1 75	.....
Ontario, North	209	373	11	1,041	44	186 37	43 75	.....	50 00	....	....
Ontario, South	253	385	18	1,670	75	....	92 25	.....	50 00	.....	180 54
Oxford, North	213	314	7	1,216	38	8 39	73 00	. . .	50 00	....	...
Oxford, South	272	324	7	1,221	37	53 58	76 25	...	50 00	....	176 70
Parry Sound, East	182	192	10	1,186	36	37 15	43 50	....	30 00	....	.....
Parry Sound, West	125	106	9	325	32	16 71	26 25	.....	28 00	.....	.....
Peel	545	525	12	2 035	78	211 06	129 50	.....	50 00	.....	227 85
Perth, North	296	362	8	2 155	51	204 13	90 00	....	50 00	....	151 55
Perth, South	231	197	8	1,231	40	35 67	47 25	....	50 00	....	162 50
Peterboro', East	169	112	6	1,895	37	45 67	27 50	.....	50 00	.....	25 00
Peterboro', West	174	181	8	1,442	40	50 12	45 25	....	50 00	20 20	40 00
Prescott	82	90	6	620	22	8 71	21 00	. . .	50 00	19 43	....
Prince Edward	240	229	10	1,320	17	26 26	60 00	....	50 00	.....	.....
Renfrew, North	85	79	5	575	5	.....	17 00	....	50 00	.....	.....
Renfrew, South	115	132	6	2,434	20	104 21	32 75	....	50 00	....	.....
Russell	103	119	5	1,435	31	56 21	18 25	.....	50 00	....	.....
Simcoe, Centre	219	150	7	955	29	140 30	34 00	....	25 00	....	134 18
Simcoe, East	191	164	7	516	28	19 95	83 50	.....	50 00	.....	11 05
Simcoe, South	119	133	4	425	10	.....	31 50	....	25 00	.....	.....
Simcoe, West	155	172	8	1,670	67	129 67	32 40	....	25 00	.....	318 60
Stormont	216	154	8	1,265	29	....	37 00	....	50 00	.....	.....
St. Joseph Island	96	106	5	441	21	54 02	25 25	.....	41 63	.....	.....
Victoria, East	135	172	8	2,225	41	.....	33 75	5 00	50 00	23 25	.....
Victoria, West	94	154	5	998	30	18 65	52 40	...	50 00	.....	.....
Waterloo, North	240	337	9	2,195	60	73 24	84 25	.....	50 00	.....	152 85
Waterloo, South	460	533	15	3,589	90	196 71	164 50	.....	50 00	....	137 00
Welland	206	191	7	580	33	127 91	47 00	.....	50 00	.....	.....
Wellington, Centre	218	404	6	1,118	26	51 81	102 25	.....	50 00	....	.....
Wellington, East	195	244	7	1,405	34	32 20	62 25	....	25 00	.....	.....
Wellington, South	179	274	8	1,235	15	2 91	162 75	.....	50 00	.....	.....
Wellington, West	99	204	6	1,671	29	62 99	60 50	.....	50 00	.....	.....
Wellington, W. (Union Br.)	87	103	5	1,295	20	59 24	28 00	.....	.....	.....	65 00
Wentworth, North	195	231	6	1,575	28	34 66	55 50	.....	50 00	.....	.....
Wentworth, South	306	245	9	1,592	55	173 71	64 50	.....	50 00	....	.....
York, East	148	179	11	1,462	38	110 44	44 00	.....	50 00	.....	39 53
York, North	140	120	7	760	27	28 69	28 50	.....	50 00	. . .	. .
York, West	188	194	7	785	45	26 59	56 75	.... .	50 00	.....	149 95
	18,258	20,387	730	131,653	3,262						

FARMERS' INSTITUTES —*Concluded.*

Receipts.			Expenditure.												
Miscellaneous.	Balance due treasurer.	Total receipts.	Due treasurer per last report.	Expense for meetings.	Secretary's salary, etc.	Postage and stationery.	Printing.	Advertising.	Lecturers' expenses.	Lecturers' allowance.	Periodicals for members.	Miscellaneous.	Balance on hand.	Total.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
10 00	16 75	130 25	21 51	5 25	35 00	3 41	17 50	.....	20 38	.....		28 20	.. ....	130 25
.....	.....	253 93	....	19 50	31 25	5 60	25 15	6 50	29 30	....	.....	90 60	46 03	253 93
.....	.....	127 00	....	23 00	18 00	4 30	7 25	.....	29 50	.....	....		44 95	127 00
.....	..	280 12		52 20	72 85	4 56	32 35	1 50	37 00	....		25 40	54 26	280 12
.....	.....	322 79	7 22	41 75	31 50	17 72	43 40	28 85	54 70	....	.....	12 00	85 65	322 79
.....		131 39	....	34 63	34 80	2 50	10 50	22 15	....	.....	.....		26 81	131 39
36 95	.....	393 48	..	41 20	38 00	17 67	8 15	21 77	16 50	..	135 00	38 12	77 07	393 48
.....	....	108 65	..	2 75	44 65	5 60	3 00	3 00	..	....	....	10 00	39 65	108 65
.....	.....	72 96	....	26 75	15 00	4 00	5 75	....	.....	.....		.. ..	21 26	72 96
8 15	.....	626 56	....	107 25	75 00	8 03	56 50	11 00	20 00	30 00	76 70	..	242 08	626 56
53 10	....	548 78	.....	32 74	58 40	7 58	28 00	44 25	12 75	24 00	61 50	31 63	249 93	548 78
.....	..	295 42	....	85 40	20 00	7 00	26 25	18 00	.....	.....	..	16 03	122 74	295 42
.....	....	148 17	....	33 73	15 00	2 50	26 00		.....	.....	.....	25	70 69	148 17
2 50	.....	208 07	..	33 85	25 00	9 00	26 05	18 90	15 90	2 50	..	5 00	71 87	208 07
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ANNUAL REPORT

OF THE

CANADIAN ASSOCIATION

OF

FAIRS AND EXHIBITIONS

FOR THE YEAR

1901.

(PUBLISHED BY THE ONTARIO DEPARTMENT OF AGRICULTURE, TORONTO).

PRINTED BY ORDER OF

THE LEGISLATIVE ASSEMBLY OF ONTARIO.

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1901.

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TORONTO.

ANNUAL REPORT

OF THE

CANADIAN ASSOCIATION OF FAIRS AND EXHIBITIONS

FOR THE YEAR

1901

To the Honorable, the Minister of Agriculture:

SIR,—I have the honor to present herewith the First Annual Report of the Canadian Association of Fairs and Exhibitions.

I have the honor to be, Sir,

Your obedient servant,

G. C. CREELMAN.

Editor and Ass't. Secretary.

TORONTO, August 1st, 1901.

OFFICERS :

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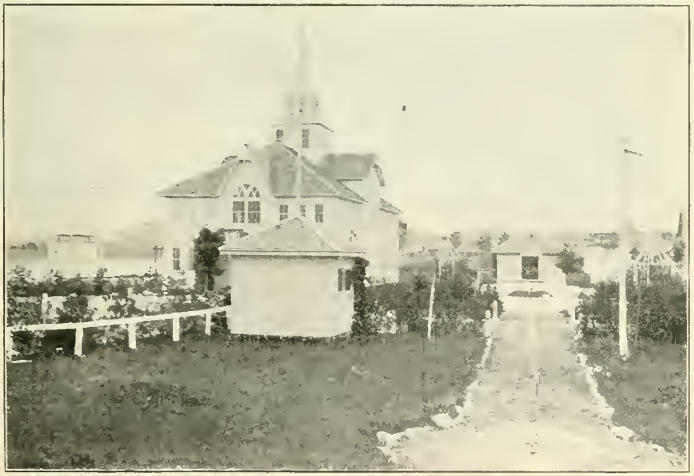
J. M Gardhouse, Highfield.

A Judge of Beef Cattle Giving his Reasons for Awards.



East Elgin County Fair Buildings and Grounds, Aylmer, Ont. One of the Neatest and most Attractive Agricultural Society Properties in Ontario.

Parade of Prize Winning Horses before the Grand Stand at the Western Fair, London, Ont.

The Industrial Fair Grounds on Farmers' Day, September 4th, 1901.

CANADIAN ASSOCIATION OF FAIRS AND EXHIBITIONS.

ANNUAL MEETING.

The annual meeting of the Canadian Association of Fairs and Exhibitions was held in the County Council Chamber, Old Court House, in the City of Toronto, on Wednesday and Thursday, the 20th and 21st days of February, 1901, beginning at 2 o'clock p.m.

The President, Mr. THOS MURPHY, of Simcoe, occupied the chair.

After the reading of minutes of the previous meeting by the Secretary, Mr. ALEX. MCFARLANE, of Otterville, the programme as arranged was carried out, the following being the principal papers that were read and discussed.

AGRICULTURAL SOCIETY STATISTICS.

BY CAPT. W. F. MCMASTER, ONTARIO DEPARTMENT OF AGRICULTURE, TORONTO.

The speaker first presented the following figures relating to Agricultural Societies in this Province, as reported to the Ontario Department of Agriculture :

DISTRICT AGRICULTURAL SOCIETIES IN ONTARIO.

RECEIPTS.	1899	1898
Balance on hand as per last Annual Report (including fees retained)	14,884 22	14,498 78
Legislative Grant	39,410 00	38,837 00
Municipal Grant	9,629 57	10,457 12
Members subscriptions and donations	29,263 99	27,739 74
Admission fees to Exhibition, rent of ground, stall, etc	46,817 42	47,203 87
Money borrowed on mortgages and notes	18,587 88	14,683 55
Funds merged from other societies for Union Exhibition	7,672 21	8,775 83
Miscellaneous minor receipts	4,457 62	4,695 09
Balance due Treasurer	1,071 10	1,379 21
Totals	$171,794 01	$168,270 19
EXPENDITURE.		
Balance due Treasurer as per last report	1,563 19	1,873 02
Grant to Branch Societies	52 01	
Prizes paid for animals and dairy products	47,849 06	45,749 18
" field, orchard and garden products	10,802 41	10,384 43
" manufacturers and improvements	2,136 55	2,421 30
" fine arts, ladies' work, etc	12,243 55	11,809 96
Grants to Union Exs. ($5,464.10) prizes for previous year paid, $1,346 89	6,810 99	6,161 69
Purchase of grounds, erection of buildings, interest, insurance, etc	18,902 90	20,535 79
Paid for loans or mortgages	19,292 83	16,299 22
Meetings, periodicals, purchase of live stock, etc	550 07	758 20
Miscellaneous, expenses, etc	37,161 68	36,286 75
	$157,365 24	$152,279 54
Balauce on hand	14,428 77	15,990 65
Totals	$171,794 01	$168,270 19

Assets.	1899.	1898.	Liabilities.	1899.	1898.
Cash on hand	14,428 77	15,990 65	Due to Treasurers	1,071 10	1,379 21
Land and buildings	226,442 35	220,616 00	Prizes unpaid	1,612 91	1,996 74
Miscellaneous	6,993 63	4,987 53	Due on mortgages and notes	76,711 45	74,584 58
			Miscellaneous	6,672 55	6,350 39
Totals	$247,864 75	$241,594 17	Totals	$86,068 01	$83,310 82

Societies reported.	1898.	1899.
District Agricultural	93	96
Branch Agricultural and Horticultural	375	387

District Agricultural Societies.

Class.	1899.		1898.	
	No. of Entries.	Amount paid.	No of Entries.	Amount paid.
Horses	14,977	$19,215 80	15,887	$17,333 47
Cattle	9,485	10,373 68	9,683	10,195 45
Sheep	7,890	6,680 91	8,112	6,871 60
Swine	5,108	4,763 75	5,518	4,924 90
Poultry	13,734	4,192 00	14,806	3,872 05
Dairy products	6,341	2,681 92	6,072	2,551 71
Grains and seeds	7,173	2,591 28	8,137	2,560 75
Roots and other hoed crops	12,603	2,835 40	13,778	2,765 40
Orchard and garden products	23,352	5,382 68	25,099	5,193 03
Implements and manufacturers	3,712	2,140 60	4,082	2,241 55
Fine arts, ladies' work and all other objects, etc	41,221	12,183 55	42,618	11,848 96
Totals	145,796	$73,041 57	153,792	70,364 87

Township Agricultural and Horticultural Societies

Receipts.	1899.	1898.
Balance on hand as per last Annual Report (including fees retained)	35,501 79	29,295 45
Legislative Grant	34,064 00	34,378 00
Municipal Grant	11,525 47	11,889 68
Members' subscriptions and donations	66,432 99	94,718 05
Admission fee to Exhibition, rent of ground, stall etc	83,736 27	56,180 86
Money borrowed on mortgages and notes	3,768 92	12,490 67
Funds merged from other societies for Union Exhibitions	7,754 87	8,154 46
Miscellaneous minor receipts	8,546 44	7,037 01
Balance due Treasurer	1,002 39	1,144 73
Totals	$252,333 14	$255,288 91

Expenditure.		
Balance due the Treasurer as per last Annual Report	909 38	1,990 77
Prizes paid for animal and dairy products	74,143 27	72,866 88
" field, orchard and garden products	17,236 70	17,397 96
" manufacturers and implements	2,750 11	3,003 97
" fine arts, ladies' work, etc.	17,254 99	16,241 62
Money paid for prizes awarded in previous year	2,765 63	2,473 82
Grant to Union Exhibitions	10,873 10	11,258 02
Purchase of grounds, erection of buildings, interest, insurance, etc	26,883 49	17,716 64
Paid for loans and mortgages	8,826 53	15,338 49
Meetings, periodicals, purchase of live stock, etc	7,509 95	7,319 97
Miscellaneous expenses, etc	50,980 76	53,939 17
	$220,133 91	$219,547 31
Balance on hand	32,199 23	35,741 60
Totals	$252,333 14	$255,288 91

Assets.	1899.	1898.	Liabilities.	1899.	1898.
Balance on hand	$32,199 23	$35,741 60	Balance on hand	921 61	750 86
Land and Buildings	217,813 15	212,837 61	Prize money unpaid	2,006 99	2,511 44
Miscellaneous	4,718 91	5,277 44	Owing on mortgages and notes	45,819 29	51,633 26
			Miscellaneous	13,041 64	12,873 62
Totals	$254,731 29	$253,876 65	Totals	61,789 53	67,769 18

TOWNSHIP AGRICULTURAL AND HORTICULTURAL SOCIETIES

Class.	1899.		1898.	
	No. of entries.	Amount paid.	No. of entries.	Amount paid.
Horses	30,963	$26,860 19	32,181	$26,201 99
Cattle	17,023	12,759 69	17,852	13,250 49
Sheep	13,469	8,630 37	14,160	8,737 60
Swine	7,889	5,701 43	8,485	5,768 93
Poultry	18,932	4,015 45	20,129	4,026 15
Dairy products	15,722	4,897 28	15,213	5,054 04
Grains and seeds	16,543	4,752 08	17,931	4,867 48
Roots and other hoed crops	30,750	5,223 62	31,069	5,214 66
Orchard and garden products	41,541	7,433 80	46,077	7,096 18
Implements and manufacturers	6,406	2,703 01	7,165	2,994 59
Fine arts, ladies' work etc	62,487	16,679 04	66,823	16,308 94
Totals	267,725	$99,655 96	277,085	$99,521 05

After submitting the foregoing statement, Captain McMaster, proceeded to make the following remarks.

THE AUDIT. The first matter to which I would draw your attention, is the absolute necessity of the balances from the previous year corresponding with that shown by the audited statement; otherwise the report to the Legislature would not correspond. One of the greatest troubles and annoyances is that of the audit not being done previous to the annual meeting, by the auditors appointed for that purpose. Some reports have been signed by one auditor only; but if an auditor dies or has left the district, one of the first duties of the directors is to appoint another and have a thorough audit completed prior to the annual meeting, else the Act has not been complied with In this respect the Act is not passive.

PRIZE MONEY HELD FOR MEMBERSHIP FEE. Another source of trouble in analysing the statements is, the prize moneys retained for membership fees for the following year. Such sums so retained are simply cash paid and should appear in the receipts as such for that year. Why should such money be held in abeyance, in the treasurer's hands? It is contrary to the Act and cannot be passed over by the Department

The form of Financial Statement has been carefully prepared by the Department with a view to meeting all requirements, but any suggestions tending to improvement will be received with due consideration

I now wish to draw your attention to the Statement herewith presented.

BALANCE ON HAND. The balances on hand vary but little from year to year. Any material change is owing to the sale of property in order to purchase more suitable premises. Neither the Legislative nor Municipal Grants show any material change.

SUBSCRIPTIONS AND DONATIONS. In members' subscriptions and donations, while they have increased in the District Societies by about $1500, in the Township and Horticultural Societies they have decreased.

FEES, RENTS ETC. The admission fees and rents of grounds, etc. in District Societies varies very little from year to year, but in Branch Societies the difference is marked, depending on the weather.

DISTRICT SOCIETIES ONLY ARE JUSTIFIED IN BORROWING MONEY. Money borrowed on Mortgage Notes I think the less Branch Societies run in debt the better, as they have but a limited area, and many of their members are also members of District Societies. District Societies are justified in borrowing money in order to provide accommodation, as required by the Act for Exhibitors.

INCREASED PRIZE LISTS I notice that the prizes paid in nearly every class have been increased as between 1898 and 1899; particularly in animals and dairy products

LOANS REDUCED I am glad to report the reduction in loans and mortgages in District Societies,—while in the Branch Societies it is the reverse as 1898, 1899.

Meetings, Periodicals, Plants, Purchase of Live Stock. I cannot too strongly emphasize these things. I consider them the basis of the Agricultural structure, on which all our national wealth depends. Some Societies purchase live stock with their funds instead of holding Fairs. It can be easily seen that in time these Societies will forge ahead in the superiority of their stock, horses, bulls, rams, boars, etc.

Live Stock Vs Hotels. The question aptly presents itself, are these Societies not doing more toward the actual development of Ontario than those who hold Fairs for the benefit of local hotel keepers? Some Township Societies are but the outcome of money subscribed by tavern keepers to qualify sufficient members to obtain the Government grant.

Conclusion. After eighteen years experience in auditing and analysing reports, my conclusion is that Township Society Fairs should be discontinued.

SPECIAL ATTRACTIONS AT AGRICULTURAL EXHIBITIONS.

By John Burns, Whitby.

The subject that has been allotted to me is one which gives very many Societies considerable anxiety, and is, therefore, one worthy of careful consideration, and of so grave a nature that I feel myself quite unequal to the task of dealing with it with that degree of ability which its gravity demands. However, I will endeavor to present a few thoughts as they occur to me in as brief a manner as possible, trusting to the ability of the delegates present to develop the same in the hope that some good may come out of the discussion.

The Object of Fall Fairs The first and primary object of the Fall or any other Fair, should be to induce the agriculturist, the manufacturer or the artist to bring together and put on exhibition the very best of their products, with a view of stimulating each other to still greater efforts as time goes on. There is no sane man but will admit that great good has been accomplished since the Fall Fair was first instituted; and there is no better illustration of the correctness of the statement than by comparing the old Provincial Fair in Toronto of thirty-five years ago with the Industrial at the present day, or the progress of any well conducted fair in the same space of time.

The Old-time Fair. In the days gone by, the people came together for a healthy purpose, mainly that of seeing the best that the several industries could produce, and also that of seeing each other; the older people coming with a cool business object in view, the young largely for pleasure; but all combining to form a grand whole. In the olden days, people came to the Fair intuitively. All that the public looked for was the date, and when the day came round the boys and girls were up probably before the parents for once in the year, and all was bustle. The old fashioned waggon was rigged up with the wooden side springs, and the whole family came out, the whole country seemed to be alive because it was Fair day. The hotel yards were gorged to overflowing, and soon the old Fair grounds were thronged with a happy crowd. The grounds were small, probably three or four acres, with the fences lined with the best stock the locality could produce A small ring was made with a rope for showing the animals and drivers in, and the lines swarming with thousands of spectators. Under the old management, the whole Fair presented the appearance of a bee-hive, and all could be taken in at a glance. The day over, the throng made their way home, tired enough but feeling that they would not have missed the Fair for a good deal. Such was the Fair of the old days, when it was filling the mission for which it was intended.

The Modern Fair. But times have changed, and one noticeable feature is the depraved desire for something of the nature of an entertainment, a thirst for excitement, and if that element is wanting, the public feel that the Fair is a failure. This change has been brought about largely by the introduction of the race ring, which necessitates the purchase or rental of larger grounds, in most cases at some little distance from the town, which renders it inconvenient to get the accommodation for teams and rigs.

The crowd is thus taken from the town, many trying their horses in the vicinity of the Fair ground, consequently the town people never see a half of the people who attend the Fairs This has the effect of producing a spirit of apathy and indifference on the part of the townspeople, which has a telling effect on the success of the enterprise.

Attractions. Coming to the subject proper—special attractions—the subject suggests that a change has taken place in the public mind, and the real and legitimate exhibits that once filled the Fair grounds and swelled the coffers of the Society from the gate receipts, have now failed to attract, and something of an artificial nature must be adopted to draw or attract the crowd, as every Society is dependent largely on the gate receipts to enable them to pay prizes and running expenses.

The Grand Stand. This state of affairs has induced many Societies to introduce the horse race and performances in front of the grand stand, and so make these attractions the leading feature in their advertising. Then in order that the crowds who are attracted in that way may enjoy that for which they have come and paid their money, the Association erects a grand stand and charge a fee and seat one thousand or more people, who are consequently tied up for the afternoon, and hence never see or take any interest in the more substantial objects on exhibition, which is very unsatisfactory to those exhibitors who have gone to great trouble and expense to make their exhibit.

The Great Problem So far, I have endeavored to place the past and present conditions before you, and as we have to deal with the present only, this brings us right up against the subject, special attractions, and are they conducive to the best interests of the Agricultural Society ? In a word, I think they are not, for the reason already given.

Then it becomes a question for those who have been for years catering to what I may be allowed to call a depraved appetite, how to dispense with those attractions and still satisfy the public, as no fair will be a success without patronage through the turn stiles. It is an easy thing for one to see an existing difficulty, but quite another thing to provide a remedy.

The Toronto Industrial. In the first place, the Toronto Industrial has reached such proportions, and the railroad gives such good rates, that large crowds from every community are drawn there, and spend two or more days, or in fact all the time they can afford, and return home to find the work on the farm running behind, and by the time their own county fair comes around, feel that they have scarcely the time to spare and hence the old time interest in the fair has disappeared.

The Cost. Any well organized society that has been depending on special attractions, whether they be horse races or performance, must do so at a cost of from three to four hundred dollars, and I am free to believe that they do not have the effect of adding twelve or sixteen hundred more visitors to the fair. If this position is conceded, then why continue to spend money at a direct loss.

Try It Without Attractions. There are societies who, while admitting that the attractions do not pay for the investment, yet would be afraid to risk running the fair without them. To such I would say, for the first year or two there might be a falling off in the gate receipts, which loss might be met by a little more activity on the part of a half dozen directors in soliciting specials, and while soliciting, let their chief claim for assistance be for the purpose of doing away with all performances, and I have faith enough in the right thinking element in every community, believing if the situation be properly presented that there would be a hearty response.

Time has created an unnatural thirst for excitement at fairs, and it may take time to counteract this state of affairs, but I believe it can be done and still preserve the time-honored institution to the community.

Discussion.

Stayner. W. B. Sanders, who occupies the double position of Mayor of Stayner and president of the local Agricultural Society, made a valuable contribution to the discussion. "I have," said he, "been in touch with agricultural fairs since 1873. During the eighties I was judge at the Toronto Fair As a result of my 27 years' experience I have very pronounced views upon this whole matter. The Toronto Exhibition and local fairs

occupy different positions. The Toronto show has a large local constituency to appeal to—a constituency which calls for amusement. The success of the show is, I believe, due to the special attractions provided. In the case of local fairs I am entirely opposed to the introduction of special features: they are not good, and they do not pay. You cannot secure anything worth while for less than $60, $75, or $100. When we brought a Wild West show to our town it cost a good deal more than that, and the addition to the gate receipts was not sufficient to pay the cost. During the last three years we have excluded these fakirs altogether, and although we have done this we have not lost ground, as suggested by Mr. Burns. On the contrary, we have four or five thousand people at our exhibition. It is true we are not exacting in the matter of admission fees. We have adopted somewhat of the Patron system, and allow a man and his wife to come in on one ticket; but we have not lost by doing so As to speeding in the ring, however, I would not think of abolishing that; it is one of the best features we have. It also serves a useful purpose. It results in the training of horses such as the market calls for, and in this way is a benefit to the agricultural interest."

Grand Valley. James Reith, of Grand Valley, said there was no grand stand in connection with his show. Neither was there horse racing; not even speeding in the ring. "Still, said he, "we have been successful. I would like to hear from some of these who have these mountebank exhibitions and learn what their experience is."

New Market. E. Jackson, of Newmarket, provided the answer. He said a Wild West show had been given at Newmarket. This cost was $400, but as a result of giving the entertainment the receipts for admission fees last year more than doubled those received in any other year during the speakers recollection. "In addition to this," said Mr. Jackson, "we had a trial of speed, limited to horses in the locality. We also gave three prizes for the best turnout of school children, and also additional prizes for efficiency in certain subjects named."

Cannington. J. N. Porvis, of Brock, said that there was always a little trotting in connection with Cannington show, and that was what drew the crowd. Their society had been gaining ground since the introduction of this feature.

Burford vs. Brantford D. G. Hanmer told of two cases; one where there were special attractions, and another where there were not. "Our township show at Burford," said he, "is one of the most successful in the province. We have a big attendance, are paying off our debt, and are able to pay one hundred cents on the dollar in prize money every time. In that show there are no special attractions. We have a county show at Brantford as well. For the county show $1,000 was spent in special attractions. Last year the County Association was unable to pay the prize money and a good many who had paid as much as $25 in entry fees not only failed to receive a prize but lost the money paid in making entries as well. This year the fair grounds of that association must either be sold or handed over to the man who holds the mortgage.

Halton G. R. Hunter of Halton, said this was a day of special attractions. "There are," said he, "special attractions everywhere—even in the church. When the pastor in our town announced he would preach on young ladies, a big crowd turned out—more than the church would hold. A few years ago we dropped our speeding in the ring and the receipts for admission fees at once fell off. Last year we had a splendid trial of speed, and the attendance was all right. One man who had strongly disapproved of having this trial of speed before it took place, said afterwards it was the best part of the show. Those who were most bitter against the introduction of this feature were right up against the fence while the trotting was going on, and they stayed until that part of the show was over."

Markham. H. C. Marr, president of the Markham show, said they could not get along at all without special attractions, but he confined his definition as to what special attractions consisted of to speeding in the ring, and the display made by Dragoons from Toronto. "Last year," said he, "our receipt amounted to $1,928. We have between seven and eight thousand dollars' worth of buildings, are clear of debt, and have $1,400 in the treasury. We could not make such a showing as this but for the assistance of our half mile track. It would be a backward movement to do without this The bulk of the attendance is made up of our young people, and young people want something with life in it. Aside from this, we give liberal prizes. Last year the prize for heavy draft horses was $20, and for stallions $15. We give $20 divided into three prizes, for

each one of four breeds of bulls—Shorthorn, Jersey, Ayrshire, and Holstein. We give a $7 purse for first, second, and third prizes in rams; $7 and $8 divided into three prizes, for boars ; and we have 174 sections in poultry."

The Secretary of the Markham show supported Mr. Marr's position. The former said the show would certainly go down without the feature furnished by speeding in the ring. " That " said he, " is the main attraction,"—a statement which was corroborated to the full by Secretary Hall.

Speeding in the Ring vs Racing.

At one time the trend of discussion seemed to indicate that the feeling was practically unanimous in favor of the affirmative. This, however, was due to a difference in understanding as to the definition of the term. The majority of those present at first included under the head specified speeding in the ring, or horse-racing, while others considered this part of an educational exhibit, and confined special atttractions to side-shows, fakirs, trapeze performers wild west business, skirt dancers, and the like.

Eventually, after a common understanding had been arrived at, it was found that the feeling was practically unanimous in favor of having a go with the horses, but was equally pronounced against side shows.

Even on the simple matter of putting horses over the track there was a question as to the sort of term that should be made use of.

" What is the difference between horse-racing and a trial of speed ?" asked Dr. Quinn of Brampton.

" It is a case of six of one and half a dozen of the other," answered Mayor Saunders, of Stayner.

" We call it speeding in the ring when it is our fair," suggested superintendent Creelman, " and horse-racing when it is held under the auspices of some other fellow's fair."

Another member said if it were called horse-racing they would not be able to get a grant from the government for the show.

D. G. Hanmer gave another reason for the more defined definition. " At our show," said he, " a minister was observed quite close to the ropes while the speeding was going on. When some one asked how he could justify his presence there he said was not a horse-race but a trial of speed he was watching."

The Law Regarding Horse Races.

Just here the question came up as to what the law says in regard to speeding or horse-racing, and Mr. C. C James, Deputy Minister of Agriculture, put the matter very clearly. "It is not a question of withholding the grant," said Mr. James, "but a question of complying with the law. The law says that an offence is committed when horse-racing is permitted on fair grounds. Even if that offence is committed, we do not withhold the grant but anyone is at liberty to summon before a magistrate those aiding in the horse-racing, and to have the offenders punished as provided by the statute. The department leaves that matter in the hands of the people of the locality. You can hardly expect a man to be sent from Toronto to enforce the law if the people of a section do not wish to have it enforced. If it is desired to put down horse-racing, the law is there, and anyone in the locality can put it in motion. If in the County of Simcoe, for instance, they do not want horse-racing, all they have to do is to enforce the law, while in Elgin, if they want races, the people need not enforce the law against racing."

"But, besides the speeding in the ring," continued Mr. Price, "we have a high-class circus performance. You may laugh at that if you like, but the average man likes to see this sort of thing."

"Do you allow the fakirs to come in and run side-shows ?" asked Dr. Clarke of Goderich.

"We do," replied Mr. Price, "and charge them for the privilege, but we are careful to see they carry on a legitimate business. If there is any attempt at gambling, we close them down at once, and forfeit their money. One man was run off our ground last year."

"Do you encourage exhibits by business men, and charge a fee for allowing the exhibit to be made?" asked Mr. Metcalf.

"We allow these exhibits," answered Mr. Price, and make no charge. Several of the business men have gone to very considerable expense in fitting up departments in the Palace for their exhibits. This is now embarrassing us, because the space taken is required for other purposes. The business men are, however, very liberal, a number of them contributing five or ten dollars to our funds. We have paid over $500 for platform entertainment alone, and we have found it paid to do so. Our experience is that this is what draws the crowd. A large number of young people join the society and pay their membership fee of one dollar A young man will get a double ticket and bring his girl in then on this ticket, and pay 50 cents after admission for a double seat on the grand stand. The grand stand, as originally built, would not hold the crowds that thronged to it, and we had to enlarge it."

SPECIAL ATTRACTIONS AT FALL FAIRS.

By D. H. Price, Alymer.

I will give you the results of actual experience. Ours is a small country fair, supported by the town of Alymer and two townships. We have had experience both with and without special attractions. In commencing, I would say, if you can make your fair successful without special attractions keep away from them; but, unfortunately, in many places it is impossible to do without these features. That is what we have found in our case. You cannot lay down a rule here which will apply to all parts of Ontario. For instance in the Town of Simcoe, which is in the adjoining county, they have one of the best agricultural fairs in the province; one that is carried on in a thoroughly clean, straightforward manner, and without special attractions of any kind whatever. That fair is, as I have said, one of the most successful in Ontario. But in our case, where I believe we have just as good a people and just as highly educated a community, we have found it impossible to do without these artificial aids. It is all very well to talk of depraved taste, but we have to meet facts as they exist, and deal with them.

Attractions defined. By special attractions I do not mean short skirt dancers and that sort of thing. I mean high class circus performances. We have had special attractions of this nature for two or three years and as a result we have been enabled to about double our prize list for live stock. Under the old system without special attractions, we had a membership of from 300 or 450. Last year as a result of the gradual working up of the fair, following upon the enlargement in special features, we increased our list to nearly 1000. By means of the increased revenue thus secured we are enabled to spend five, six or seven hundred dollars a year in improving the grounds. We have put in artificial lakes and fountains, planted cedar hedges and established our own electric light plant. We have not lost sight of the agricultural features, in fact, these have been improved and made more useful with the extra means placed at our disposal by the moneys received from the increased attendance.

Horse Racing Straight. Even in the matter of racing, or speeding in the ring, we have had to go beyond the lines formerly laid down. We tried in the first place to confine this to a test for purely farm horses, but we found that one farmer, having an especially good horse would spend as much as fifty dollars in having the animal trained. Other farmers, knowing this, would then refuse to compete, and thus the events were not filled. Now we have placed this whole thing in the hands of the horsemen themselves. They raise the money for prizes, pay out the prizes, and leave us free of all responsibility in the matter, except the general supervision in order to keep the thing clean. The money for the speeding part of the show is raised by the horse breeders, hotel men, and those making entries. It does not take as much as you would think. The entry fee is five per cent., win or lose, and ten per cent. for the winners. Sometimes we have actually had a profit from the entry fees over and above the amount paid in prizes, but the parties I refer to are liberal in putting up funds. Hotel keepers will give from $35 to $50 for a thing of this kind; merchants will give five or ten, and the horse breeders also contribute. We get liberal

contribu ions from other sources also. Our president is a private banker, and he does not stop at spending $50 to $100 out of his own pocket to help us out.

"Would not the speeding contest be kept cleaner if you kept control in your own hands?" asked one.

"Well, we have control in a way," replied Mr. Price; "because we have a voice in the management, and so keep a general oversight over the whole thing."

"Do you give the horsemen a share in the gate money?" asked Mr. Metcalf.

"Or in the grand stand receipts?" asked F. D. Blakely of the North-West Farmer.

"No," replied Mr. Price, in answer to both questions. "All the money that goes into the speeding contest is raised in the manner I have stated, namely, by contributions from the business men, breeders, and the horsemen themselves."

"Our experience," said F. Chisholm, treasurer of the Halton Exhibition, "has been much the same as that of the people of Alymer. We find that we could not get the hotel people to contribute to an ordinary show, but we can get them to put up for the horse racing."

"What is the best prizes you offer for speeding?" asked Dr. Clarke.

"One hundred to one hundred and fifty dollars, and we get good horses for that," answered Mr. Price.

Performances before the Grand Stand. Mr. Price continued: While the directors have nothing to do with the raising of money or direct management, they have control of the races, and see that everything is conducted properly, and that no pool selling, book-making or gambling of any kind is allowed. The horsemen do not share in the grand stand or gate receipts in any way. The money is contributed by hotel men and horsemen who would not donate a cent if there were no races. It is therefore a paying investment for the Society, as the races are undoubtedly a drawing card for both the gate and grand stand. Besides this we have a high class circus performance on which we spend about $500, annually. You may laugh if you will, but I do not hesitate to assert that the average man likes to see a circus just as much as the boys and girls. We know that this pays us also. It has largely increased the sale of membership tickets, especially to young men and boys, and also draws others who would not walk across the road to see a big pumpkin.

Without some performance of this kind it is utterly impossible to have a night exhibition, and our receipts from the gate and grand stand at night (we give three night shows) will, with fair weather, pay every cent of the cost of these attractions. Before we adopted this plan of amusements before the grand stand we did not make a dollar out of a night show, and practically not a dollar out of the grand stand, day or night. The change has certainly been a good one for us. It has proved to be the right thing to draw the fellow who does not exhibit to raise money to pay the one who does exhibit.

The Farmer and the Fair. Our experience is that those who make the exhibits in the agricultural department are not the ones who provide the funds for running the fair. They will give a dollar for membership fee. This, in our case, entitles the holder to free admission for member and wife, or any other member of the family; it permits him to bring his horse and team into the ground, and to make as many entries as he wishes. The member can go in all through the three days of the show, for either day or night performance. We are as liberal in other matters as we are in that of admission. We provide free food for the stock, and employ a man to keep the stalls and alley-ways clean. All this is given for one dollar, and the man who pays that dollar may draw from ten to twenty-five dollars in prizes. In order to make up these prizes we must get the 25c. admission fee, and we get the bulk of our admission fees from those who do not care a rap for the agricultural side of the question.

Conclusions re Attractions. To sum it all up, the introduction of special attractions in connection with our fair has more than doubled the gate and grand stand receipts, and nearly trebled the membership fee, within three years. It gave us money to plant trees, build roads and walks, erect fountains, build artificial lakes, and make the grounds the finest country grounds in Canada. We have added to our general prize list, and more than doubled our premiums on all live stock. We own our electric light plant, and have one of the best half mile tracks in Canada. I cannot say what it will do for others, but the above are the facts regarding our Society.

Discussion

50 Members, but only 17 were Farmers. "We have been enabled," said Mr. Hunter of Halton, speaking along the same lines, "with the help of our special attractions, and by selling peanut stand privileges, etc., to set up a prize list of $500, a prize list that has secured from 400 to 500 entries. But if we depended upon the farmers alone we could not set up the prize list or secure the entries. I have myself secured fifty members for our society, and only seventeen of these are farmers. Too many farmers do not care to give a dollar unless they see a prospect of getting five back again."

"That is our experience, too," said Mr. Metcalf of Huron, "and agricultural societies are kept up by the business men rather than by the farmers. If the farmers would take the interest in this matter that business men do, we would not need any special attractions to draw the crowd. Too many of them will pay their dollar in membership fee only when they think they have got an extra big turnip or something that will secure a prize at least equal to the membership fee. The great majority of the farmers now on our list of members are those from whom we have retained $1 as membership fee from prizes given in the previous year."

Mr. Price said that their experience in Aylmer accorded with this view. "We never canvassed so little for members," said he, "as we did last year; half of those who are on our list came into my office and paid their fee voluntarily, and still, as I say, we have more than doubled our list of members. The great bulk of these members are not farmers, but young people and townspeople generally—people who want amusement and pay their money in order to have the opportunity of getting it."

A Poll on Special Attractions. In order to find out more clearly than could be brought out in discussion just what the practice was in the different fair associations in regard to this matter of special attractions a poll was taken of those which have special attractions and those which have not. It was discovered by this vote that those associations which have nothing but a purely agricultural exhibition, with both special attractions and horse-racing left out, had seven representatives present. Those which allow speeding in the ring, but have nothing in the way of special attractions, had twenty-nine representatives present. Those which had special attractions in addition to the speeding in the ring had five representatives present.

In defining special attractions Mr. Marr of Markham used the words: "Monkey on a stick" or "bare legs," but the general definition was understood to include everything in the way of platform amusements, balloon ascensions, wild west shows, and the like.

A Dangerous Thing to do. Mr. Venning of Dorchester mentioned a practice which is probably not confined to one fair association. He said that he had taken $20 out of his own pocket to pay membership fees for twenty men, relying on these men to return the money later on. "I did this," continued Mr. Venning, "in order to enable the treasurer to make the required affidavit with a clear conscience. I succeeded later on in getting this money, save in one case, and in that case I substituted another name."

"Is that in accordance with the law?" asked Mr. Jackson of Newmarket. "I understand there must be a certain number of names of members on the roll at a certain date, and that the treasurer must make affidavit to that effect."

"That is so," said Mr. James, "and I would not like to be the man who would make the affidavit unless that number of *bona fide* member were on the roll."

Mr. Venning said that in the case referred to the treasurer did not know but that the money had been paid by *bona fide* members.

Dividing the Funds. Mr. Fred Metcalf of Blyth said there should be a fairer distribution of the funds allowed agricultural associations. "In our riding," said he, "the electoral district show is held at Brussels. That has a grant from the Province of $380, while our township show, held at Blyth, received $117. Still our show is the better of the two. Our gate receipts last year, on the basis of 10 cents per head, totaled $735.85, while the receipts at Brussels were less than $500."

Mr. Metcalf proposes introducing some educational features in connection with his own show this coming year. "We are," said he, "in the centre of one of the best apple-producing sections of Ontario. Apple-growing is an important industry with us. The area in orchards is continually increasing, and many of those who contemplate setting out

trees are in doubt as to the variety to plant. As an object lesson I intend giving a five-dollar prize for the best collection of apples, five in each collection, to be shown at our next fair. That will enable people to see just what sort of fruit they may expect to obtain from the different varieties named. In addition to this, I hope to arrange for a little talk by some expert on the quality of the fruit shown, and its adaptability to different soils, etc."

WHY MANY FAIRS HAVE FAILED

By C. C. James, M. A., Deputy Minister of Agricutture for Ontario

It has been said here to-day that these agricultural shows are not getting the support of the farmers. Why are they not doing so? If they are not to be continued as agricultural societies, if they are not to get the support of the farmers, would it not be better to frankly face the situation and change the whole system? Why keep up the farce of calling something an agricultural society, when it is of an entirely different nature? Is there not something wrong in the system when you do not get the support of the farmers? The farmer is perhaps the most hard-headed man in the community; if he does not put up his dollar, it is because he does not think there is the worth of a dollar for him in the thing. If he can see a dollar's worth of value he will give the dollar every time.

Why Live Stock is Overlooked.—You say that the grand stand performance is necessary to draw the young people Why are not people attracted to see the live stock show as well? Do you give them an opportunity of seeing this stock under favorable circumstances? Are your grounds so laid out and kept in such order that a young man and a young woman, or a man and his wife, can go and see these as conveniently as they can the show from the grand stand? Have you not been developing the grand stand features rather than the educational features? (Applause)

The live stock parade at the Toronto Industrial Exhibition was one of the most notable features of the whole show. Those who did not get there early could not get anywhere within reach of the ropes. The great majority of the people preferred to see that rather than the circus performance; and they were right. There is no finer exhibition than a good display of live stock. Do you afford your people at your local shows as good an opportunity of seeing an exhibit of this kind as was afforded in Toronto?

Young people will naturally go where they are comfortable. If they go to a grand stand, and the show is not good, they can at least carry on a conversation in comfort. My experience with local shows is that such an opportunity as should be offered is not offered to those who desire to see the stock. You have been pushing the grand stand features, but have not pushed the others in equal proportion. Until that is done, I am doubtful if you will get the interest in the live stock that you should.

A Pointed Illustration. Take the Provincial Winter Fair at Guelph, for instance. There were no special attractions there; there was no fakir there; there was nothing but a straight educational exhibition; and still the one thing needed was more room. Why did such crowds go there? They went there because they could see a purely educational exhibition with the same degree of comfort as they experience in witnessing a grand stand show at the ordinary fair. If that same idea is adopted in connection with local fairs I believe you will have similar results. I am not opposed to amusements altogether, I think these are all right in their place, but there is danger of these running away with the management, and thus causing the educational features to be overlooked.

All Depends on the Start. Everything depends on starting right. If you start with amusements as the main feature, you cannot afford to drop these, because people are educated to look for them. But if you start on educational lines, and keep them up, you can hold the crowds without the special attractions A great deal depends on the officers. A good officer will make a success of a show of any kind An active officer at Aylmer has made a success of the entertainment features at that show; an active officer in the Simcoe show has made an equal success of an educational exhibition. It all depends on the man, and the line on which the start is made. People stay in the grand stand through an inferior show—and the bulk of the entertainments offered there are very

inferior indeed—because it is a comfortable place to stay. Provide equally good accommodation for those who wish to see the live stock show, and you will have no difficulty in getting the crowds there.

Avoid Drifting from Right Lines One thing I am anxious about is that we shall not drift away from the purpose for which these exhibitions were established. The first object, and the object all the time, of these institutions is the education of the people. Remember that these shows have not been created for the purpose of making money. They have been created in order to serve a useful purpose. If you can keep your accounts even without special attractions, then I would say, by no means allow special attractions to be introduced.

THE AGRICULTURAL SOCIETIES OF ONTARIO.

By F. W. Hodson, Dominion Live Stock Commissioner, Ottawa.

It was in 1830 that financial aid was first given to agricultural societies by Provincial statute. At present there are in Ontario, receiving aid and assistance from the Legislature, ninety-six District Societies and 375 Township and Horticultural Societies. In 1868 the appropriations for these societies amounted to $54,074 ; in 1878 the amount was $59,699. There was but little increase until 1892, when the grant was increased by $100 to each district, at the request of the various societies. The total amount appropriated in 1897 was $76,650, where it now stands. From 1872 to 1896, the total grants to agriculture have amounted to $3,956,045, and of this $1,561,023 has been given for agricultural societies. If to this we add $418,952, given to the various agricultural associations, we have a total of $1,979,975 out of $3 956,045, or just $1,953 more than half of the total. That is, the Government has handed over a little more than one half of its appropriations to the farmers in organizations to be expended by themselves. This has been largely supplemented by fees for membership, &c. Financial and other statements and reports, audited and certified, are all required to be furnished every year, and the general work is supervised by the Department. These societies, during the twenty six years, have done a great deal in improving the agriculture of Ontario, by the introduction of pure-bred stock and improved varieties of seeds, and by stimulating the farmers to the development of superior products of all kinds.

In 1895 there were 96 District Societies and 361 branch societies. The following are their financial statements :

Receipts		Expenditures	
Cash on hand	$ 37,965	Prizes for animals and dairy products	$117,142
Legislature grants	74,871	Prizes for field, orchard and garden products	30,828
Municipal grants	19,723	Prizes for manufactures	6,796
Subscription fees and donations	89,440	Prizes for fine arts and ladies' work	29,296
Gate receipts, rents, &c	118,337	Other prizes	5.359
Money borrowed	32,444	Buildings, grounds, insurance, &c	38,363
Miscellaneous	13,877	Borrowed money repaid	32,667
		Stock, machinery &c	4,493
		Working expenses	79,890
Total receipts	$386,657	Total disbursements	$344,834

The statement of assets and liabilities at the end of 1895 was as follows :—

Assets		Liabilities	
Cash on hand	$ 38 639	Owing on notes and mortgages	$119,140
Land and buildings	379,068	Prize moneys due	6,656
Miscellaneous	23,948	Owing to Treasurers	5,494
		Miscellaneous	6,346
Total	$441,655	Total	$137,636

I have taken the year 1895 as an example because it represents a fair average of those which have gone immediately before and those following.

"The objects of District and Township Societies shall be to encourage improvement in agriculture, horticulture, manufactures and the useful arts :

(a) By importing and otherwise procuring seeds, plants and animals of new and valuable kinds ;

(b) By offering prizes for essays on questions of scientific inquiry relating to agriculture, horticulture, manufactures and the useful arts ;

(c) By awarding premiums for excellence in the raising or introduction of stock for the invention or improvement of agricultural or horticultural implements and machinery, for the production of grain and of all kinds of vegetables, plants, flowers and fruits, and generally for excellence in any agricultural or horticultural production or operation, article of manufacture or work of art.

(*d*) By carrying on experiments in the growing of crops, the feeding of stock or other branch or agriculture, or by testing any system of farming through arrangements with one or more of the farmers of the municipality in which the Society is organized.

A New Act Needed. All the clauses but the one allowing an annual exhibition seem to have been lost sight of, with the result that an network of small shows covers the entire country. 'Tis true the Act allows the Associations to amalgamate, but this is seldom done, or long continued, because of petty, personal or sectional jealousies. The condition as it now exists in Ontario was established long ago, and although the Act has been amended from time to time, it is antiquated. An entire re-organization is needed. When there were no railways and few thoroughly good roads, the present Act and system were desirable, the most desirable that could have been devised, especially as the Agricultural and Arts Association then existed. The county and township associations were then controlled and guided by the council of that body, the permanent secretary of which was the superintendent of the Ontario Fair System, but when the Agricultural and Arts Council was by the Acts of Parliament disbanded, the entire Act should have been thoroughly revised Since then the county and township associations have been without an active head or central guiding power, and have drifted in as many different courses as there are associations. 'Tis true they have reported to the Ontario Agricultural Department annually, but the work of that department is so varied that only a very superficial supervision can be given, these associations What could be done under existing conditions has been done, and well done.

There are many good exhibitions in the province, but none that can not be greatly improved from an educational point of view.

Now Two Agricultural Associations in each Riding. In each electoral district now covered by the district and township associations, there is a Farmers' Institute organized, which annually receives a grant of $50, part of which comes from the county. Nearly $10,000 is annually spent by the Ontario Department of Agricultural in this work.

Unite Fair and Institute Systems By uniting the Institute and Fair Systems under one management and under one board of Directors in each district, by allowing each district to hold or not to hold a show, as the case requires, but allowing each to hold meetings annually, as already arranged for Farmers' Institutes, a great deal of money could be saved annually.

No Extra Cost for Administration. It would cost no more to administer the combined Fair and Institute System than it now costs to administer the Institute System. The same official, viz , the Superintendent of Farmers' Institutes, could do both, without causing him great additional work. For should a county or a township in a county hold one or more shows annually, the shows would simply count as extra meetings and be reported as such to the superintendent on forms supplied for the purpose. Some Institutes are already doing this

Expert Judges. Doubtless the number of fairs now existing should be reduced, some claim that shows should not be held nearer to one another than from 30 to 50 miles. This is a question to be considered and decided by the people or their representatives. By uniting the Institute System and the Fair system, not only much money and effort would be saved, but the best men in each county and township could be elected as directors to the joint associations. Where desirable, fall shows could be arranged in groups as Institute meetings are now arranged. To these when requested by the directors, the Ontario Department of Agriculture could send expert judges for each

class of stock; etc., as is now done in the case of speakers to Institute meetings, many of whom are engaged from two to three months each year.

For Institute work the Province is divided into about 100 Institute Districts, in each of which the Department allows an Institute to be formed. These Institutes are arranged in Divisions. There are 12 such Divisions in the Province. The Institute meetings in each Division are so arranged that a speaker chosen for the work may commence we will say on the first of January and continue until the end of the month, addressing one or two meetings each day. The date of meeting and the speaker sent are chosen by the Superintendent of Farmers' Institute.

No Institute is compelled to hold its meetings at the time set by the Superintendent nor is any Institute compelled to accept the speakers chosen by the Superintendent; this is left entirely to the Institutes. Each Institute is at liberty to ask for speakers and an allottment of dates, when sending in their annual report to the Superintendent. When they do so, speakers are sent free of charge to the regular Institute meetings, just as judges could be sent to the shows. By this plan better judges could be obtained; men who not only could judge well, but who could address the spectators and tell them why they placed the awards as they did. Thus more uniformity would be established in judging, and therefore in the type of each breed judged. Many educational features could from year to year be added that would be of great value to the country. Without additional expense, when desired by the local society, prizes could be awarded in each township and county for the best managed farm, flocks, herds, studs, &c. This would all come within the scope of the township and district associations. By such a plan a great deal of valuable information could be obtained yearly and published by the Superintendent.

Much Injustice is Done by Present System of Judging. If this plan were adopted one judge should be sent to each division to judge horses one for cattle and one for sheep and swine. In each class a good local man should be added. This local man would in this way be educated for the work and competent men be available. The work of each judge or committee should be carefully and impartially reported by the officers of each association on blanks provided for the purpose. Men could be employed as judges for several months each year and properly paid for their services, as institute lecturers are now. This course would encourage good practical farmers to fit themselves to act as expert judges. As it is now, it a hardship and a loss to a suitable man to act as judge. The employment of incompetent judges is a great injustice to exhibitors. It is a serious matter for the farmer to spend money, time and feed in fitting a stud, herd or flock, and at the end of six or eight months have the prizes placed by a novice, or worse still by a knave, some crafty competitor has appointed. At the smaller shows the novice is frequently appointed; at the larger shows the knave too often appears. The present system of appointing judges and making awards has in many cases lost all educational value. Many of us have lost sight of the fact that this money is granted for educational purposes.

The dishonest and the ignorant judge is each a public nuisance. Another almost if not quite as great is the professional exhibitor, who each fall will buy, borrow or steal a full exhibit along some line, sometimes in several lines, and scoop in a large amount in prizes at a number of shows Three months after the shows are over, if you visit the home of such a one you cannot find a dozen animals or birds good enough to use for breeding purposes. At county and township shows prizes should be awarded only to makers, growers or breeders of the various exhibits; in fact, at our larger shows more encouragement should be given to the actual farmer and breeder than is now done. Managers are afraid to take this stand for fear of injuring their respective shows. Let the success of the Provincial Winter Show be an encouragement to such.

The Provincial Winter Fair. Will the people appreciate an exhibition run on purely educational lines? I think they will. For proof of this let us glance at the history of the Provincial Winter Show. Up to 1890 it was conducted by the Agriculture and Arts Association and such local societies as chose to contribute. In 1892 the Provincial Live Stock Associations took a controlling interest in this important exhibition. The results have been most gratifying In 1891, there were 91 entries in all classes; $102 were received as entry fees and $86 as gate receipts. A total of $188 was therefore received, and there was $325 paid in premiums. Under the supervision of the Associa-

tions there has been a steady growth until in 1898 there were over 800 entries and over $1,100 gate and entry receipts. The amount paid in prizes was $4,500. In 1899 there was over $5,500 paid in prizes. In 1898-99 block tests and lectures by the judges in the rings were introduced, and have proven of great value. In 1900 there were over 3,000 entries and 11,400 persons attended the exhibition; a lecture room was provided and seating for over 600. This accommodation was inadequate. Hundreds wished to hear the lectures who could not get into the room. It is safe to say that this is the most important winter show held in any part of the world. Visitors attend from all parts of the continent. The success of this show proves that the people wish to be instructed. I believe that the greatest *attraction* that our county and township exhibitions can offer is a carefully prepared educational programme. Commenced in a small way and carefully extended year by year.

A Plea for the Boys and Girls. During the last few months I have received hundreds of letters and copies of posters and I have been shocked to see to what straits the directors of some of our local fall shows have been driven in the hope of drawing a crowd.

The following is an example :—

SPECIAL ATTRACTIONS:

Horse Racing on 13th and 14th.

"Great French Jugglers, Tumblers, Flying Trapeze Actors, Slack Wire Performers, &c. Moving Pictures of South African War, as shown lately in New York and other large cities. Short-skirt Dancers, Bicycle Races, Merry-go-round, Glass Blowers exhibit, &c.

The two candidates for parliamentary honors have been invited to speak at the Pavilion in the Exhibition Grounds, on the evening of the 13th instant."

To this wretched bill were attached the names of two good men as president and secretary.

I say with all reverence, "God bless our boys and girls if they are educated by the jockeys, the jugglers, and the females with short skirts, and the drove of common fakirs who are encouraged and even hired to attend our fall exhibitions both great and small." Gentlemen, it is time to call a halt.

Abolish Horse Racing at the Fairs. Horse racing, if properly conducted, is not an objectionable sport, but in my opinion it should have no place at our fall shows. We send our sons and daughters to the fall shows to learn in other lines. Encourage if you will your local racing clubs, but let them meet at another time and place. They do the fall shows and many of those who attend them an injury. The following is a copy of a letter I recently received from a reliable director of one of Ontario's most prominent local exhibitions. It, too, may be taken as a sample of many others :—

"I send you data as to the amount of money spent on special attractions at our last fall fair. Since seeing you I have made careful enquiries and find that two brass bands were paid a little over $100. The trotting and jumping prizes were about $250. The man with the balloon got $120 for one ascension each day, the society to find all the needed appliances, so that he cost the society about $145. The special attractions cost $500. The first day there was a good turnout; on the second day the total gate receipts were $135. On that day the prizes for horse racing amounted to $100. For balloon which did not go up on account of high wind $60. For band $35. Total for special attractions second day, $195. Total gate receipts second day, $135. This statement does not include caretakers, prizes, or any other legitimate expenses."

'Tis Time for a Change. A plan which should be introduced in Ontario and for which the Province is ripe, is the British method of local associations such as our township societies, hiring for the season or buying thoroughly good sires for the use of their members. This plan has proved of great value in Scotland, and will do so here. The use of better sires can thus be obtained by the general farmers in a district than by any other method.

The plan also proves of great value to the country, because the best animals are bought for use by the local associations; while under present conditions the best sires are annually sold out of the country, the general farmers often using inferior underbred or

grade sires. This is telling seriously on the stock of the country. To meet foreign competition successfully Canada must produce the best of everything. Five-sixths of all the produce of our fields is fed to live stock. How important is it that the stock shall be of good quality.

Several Societies in Ontario have for years bought and kept stud males for the use of the members, one township owning as high as 18 Shorthorn bulls. Mr. A. W. Cohoe, Sec'y-Treasurer of the Rochester and Maidstone Agricultural Societies, writes ;—"This society has kept stock animals for years to the full limit of its means, and our members have the name of owning the best stock in Western Ontario. We have more good buyers and ship more good stock from Woodslee than from any similar station west of Toronto. Our system has proved very valuable, others give similar evidence."

What Quebec is Doing. On February 1st, 1901, the Department of Agriculture of Quebec issued the following letter :—

Quebec, 1st Feb'y, 1901.

Sir,—I take the liberty of calling your attention in a special manner to a resolution of the Council of Agriculture, intended to give better facilities to agricultural societies for the improvement of the breeds of farm stock in this Province and which resolution was adopted by the Council at its sittings of the 23rd and 24th January last.

In future, agricultural societies shall have the right, whenever they deem advisable not to hold an exhibition, to spend the subsidy allowed them by the Government, either in purchasing thorough-bred live stock or in giving bounties to owners of such stock for keeping the same within the limits of the societies, and, in such case, the directors may refund to members the entire amount of their subscription in fodder seeds or chemical fertilizers. The agricultural societies will thus have all the necessary facilities for recruiting subscribers.

By thus enlarging the sphere of action of our agricultural societies, the Council of Agriculture has merely carried out the wishes frequently expressed and met a need which the entire farming class unanimously desired to have supplied.

The importance of the improvement of farm stock is admitted on all hands and if there be still any diversity of opinion with regard to the means to be employed to attain that end, there is no longer any discussion as to the merits of the question to be solved.

The breeding of horses, in particular, should receive special attention from agricultural societies. England has recently purchased large numbers of horses, but unfortunately while we were selling her large cargoes of hay, of meat, of canned fruit, we could only supply a very small number of horses of the standard required.

We barely supplied 3 per cent. and yet Canada is acknowledged to be a country well suited to horse breeding.

We have thereby lost the opportunity of realising large profits, not because we had no horses but solely because our animals were not considered fit for service.

There is therefore a future for the farming classes in the raising of good horses for army remounts and even for commercial purposes.

If I have deemed it my duty to call your attention in a very special manner to the decision of the Council of Agriculture, it is because I am convinced that it may, if wisely carried out, render great service to farmers and that you will add your efforts to those of your countrymen who take an interest in the development and progress of Agriculture, the basis of our national prosperity.

The new regulations of the Council respecting bounties and the purchase of thorough-bred live stock will shortly be sent you.

I have the honour to be

Your obedient servant,

F. G. Miville Dechene,
Commissioner of Agriculture.

What Nova Scotia has Done. In a letter dated February 8th, 1901, Mr. W. B. Chipman, Secretary of Agriculture for Nova Scotia, writes :—

"Our agricultural societies were established 110 years ago and were reorganized in 1864 The Act states :—

"The object of such agricultural societies shall be to encourage and promote the introduction of improved stock, seeds, fruits, roots, implements, methods of culture, drainage, orchard cultivation, and improvement in farm buildings and domestic manufactures; and to diffuse information concerning agriculture and horticulture. The funds of such societies, derived from the subscriptions of members or the public grant, shall not be expended for any object inconsistent with those above mentioned."

Of late years we have confined the work of the associations to the purchase and maintenance of breeding sires. If they wish to go outside of this they must ask permission from the officers. We now have 131 associations, the divisions are small. 73 societies which recently reported owned 117 bulls, one society has 8, many societies also own rams and boars."

Improved Live Stock in England and Ireland. In a recent letter Mr. Sanders Spencer, Holywell Manor, St. Ives, Hunts, England, says :—

"For many years various societies, mainly the district societies in both England and Scotland, have hired stallions for the season; the first call for them to rest with the members of the societies, any vacant nominations to be open to the general public at an increased fee. In Northumberland the county society have for two or three years purchased Shorthorn bulls, which have been stationed in the country districts. Very great benefits have been derived from this access to good sires. An extension of this system is most desirable and very probable. In Ireland the Congested Districts Board purchase large numbers of Shorthorn bulls and Scotch Polled, as well as light and heavy horses These are placed at service for a low fee Nothing has done more to grade up the Irish stock, which (cattle especially) has improved immensely to my knowledge during the last forty years."

Canadian Horse Breeders Advance Along Similar Lines. At a meeting of the Canadian Horse Breeders' Association, held in Toronto this month, it was decided to adopt the Scotch system of granting premiums from the funds of the Association, to specially selected pure-bred stallions, which will serve in certain districts. The understanding is that local agricultural societies, through which these premiums are to be given, shall supplement the grant made by a sum of equal or greater amount, and shall further guarantee a certain number of mares at a fixed service fee. This Association has this year set apart $500 for this purpose.

A Superintendent Needed. In this and in previous papers dealing with our agricultural societies I have suggested some reforms. I am conscious that it will take time and patient effort to bring any or all of them to pass. I do not wish to see either the large or small societies expunged, but to see them improved. By them a great work may be accomplished.

Before they can be improved a suitable man must be chosen and given charge of the work. In due time the Agricultural and Arts Act should be revised. As we have shown that nearly $400,000 is annually spent by the officers of agricultural societies in Ontario, the oversight of the work should receive the undivided attention of a most capable man. By this means the work of the associations can be made uniform. Such a course will not increase but lessen the public expense.

As an example take the Farmers' Institute system. In 1891 95 meetings were held and about 2,500 members enrolled; in 1894 a superintendent was appointed. From that time the work improved annually. In June, 1900, the membership had increased to 18,058. The number of meetings held that year was 715, and the attendance totalled 138,982.

In 1894 the cost of each meeting was $25 41. Last year it was $13.50. Here we see the advantage of careful organizations and supervision. The same conditions would prevail in the case of the agricultural societies.

This is a very important question, not only of interest in Ontario, but in every Canadian province. The agricultural associations have great possibilities before them which have yet to be realized.

Discussion.

Proposal Came as a Surprise. Mr. Hodson's proposal came as a thunderbolt to the delegates, and they viewed it rather timorously—as one might handle a strange object, not knowing whether it was dynamite or a meteorite.

"I can," said Mayor Saunders, "see a great many difficulties in the way of carrying out the suggestions made by Mr. Hodson. The adoption of these suggestions would lead to the closing of many of our shows. In my own electoral district there are five or six local agricultural associations, and three horticultural societies. I am sure if we attempt to unite these with the Farmers' Institute we will create complications we may be sorry for afterwards. I fear, for one thing, that, as the whole institution would be under the control of the Government, a political complexion might be given to it which would cause injury."

Not Necessarily Fewer, but Certainly Better Shows. "You forget," said Mr. Hodson, "that according to the suggestions in my paper it is expressly stated that none of these local shows should be wiped out, save by the action of the people themselves. My desire is, not to wipe out, but to aid in systematizing the work. This cannot be done

effectively save by the appointment of a superintendent for the whole work. I have suggested a cheap way of securing this supervision. What have we done in the Farmers' Institute by means of systematizing? In the old days it cost $25, $35, and $40, and even more, to hold an institute meeting. Under the present system, with a central head, and the work systematized, the cost is $13.50 Why was the cost high in old days? It was because of lack of system. Let me give you one illustration. A local institute asked that Professor Dean and another speaker be sent to Smith's Falls. It cost $74 to send these speakers there. Some time after the people of Perth, who had heard of the success of the Smith's Falls meeting, wanted the same speakers at their meeting, and we had to incur the same expense in providing for the second meeting. As it is now, speakers take regular routes, and go from one place to another within easy reach of the last place. This is how we have reduced the cost of holding meetings.

Good Judges at Little Cost. In the case of local fairs, if good judges are employed, the cost is greater than the association can afford. Under the plan I have proposed judges appointed by the Live Stock Associations would go from point to point; these would be first-class men, and would be provided at little or no cost to local associations. Neither do I see any reason to fear that a political complexion would be given to the matter. When I was superintendent of the Farmers' Institute system I had the selection of speakers. I never asked a man his politics in appointing him on the staff, but I know there were Conservatives, Liberals, and Patrons on that staff. Never once were the screws put upon me in making selections, and I do not see why political influence should be felt in the appointment of the judges, more particularly since the appointments would be made by the Live Stock Associations"

Difficulty in Covering the Ground. Mr. Jackson thought there would be difficulty in getting judges to cover the ground in the time allowed by circumstances. "Your Institute campaign," said he, "covers practically the whole winter; but all the fairs of the Province occur within a few days."

"There are," said Mr. Hodson, "three hundred local fairs held every year. By dividing into twelve divisions we could cover the ground with one set of judges in seven weeks; by dividing into fourteen divisions we could cover it in six weeks. Besides, you must remember some of the fairs would not fall in with the arrangements."

An Interference with Education. Mr. Reith said the agricultural societies were part of the general system of education in the Province. "We are continually," said he, "seeking to extend our educational system. One of the latest steps taken in this direction looks towards the organization of travelling libraries. I am afraid this movement for the destruction of agricultural societies is in the direction of curtailing educational work."

But Mr. Reith said he himself had for years advocated the appointment of a superintendent for the whole Province.

Dr. Robinson, the president of the Halton Farmers' Institute, favored the adoption of Mr. Hodson's proposal to amalgamate the Farmers' Institutes with the fair associations. "It would," said he, "result in a saving of money, and add to the value of the general educational work performed along agricultural lines."

Referred to a Committee. Mr. Hodson's paper was then referred to a committee, consisting of Messrs. Creelman, Hanmer, Laidlaw, Saunders and Jackson, with instructions to report at the next annual meeting.

OPINIONS OF PROMINENT FARMERS

From all Parts of Ontario, on the Present Condition of Our Township and District Society Fairs.

In order to find out just what our people thought of the fairs system as now carried on in Ontario, the following circular letter was sent out. We append to this paper some of the replies:

Ottawa, November 26th, 1900.

My Dear Sir,—

At the urgent request of several prominent gentlemen I carefully prepared an article entitled, "Results obtained in the Province of Ontario by Organized Effort." This article was published in several papers, each having a large circulation among farmers. By this mail I send you a copy of the

exhibition number of *The Farming World*, in which this article also appeared. Please see pages 48 to 51, inclusive. I wish to especially call your attention to page 51. Will you kindly read the articles published under the sub-heading, "Ontario Has Made Mistakes"? After you have read it, please write me your views on this subject. For several years I have given a good deal of attention to this question and have come to the conclusion that much of the money and time spent in maintaining and attending many of the small fall shows is worse than wasted. There is a growing feeling throughout the country that the Ontario Agricultural and Arts Act should be thoroughly revised, and that our present fair system should be re-organized. I am not in favor of doing away with our local Agricultural Associations, but of putting them on a better and more useful footing. Fewer fairs and better fairs should be the order of the day. Many of the local Agricultural Societies can do more useful work in some other direction.

The system of buying and owning, or hiring, pure-bred males by Societies, as is largely done in Europe, is very advantageous. By this plan every farmer in a district may have the use of a very desirable sire of any of the pure breeds of horses, cattle, sheep or swine, by simply paying to his local Society a small annual fee. In some places all membership fees are pooled and used by the executive officers in maintaining the animals owned at convenient centres. After stock males are once bought they can usually be sold for enough to buy others, when they have been the property of the Association long enough, or an exchange can be made with some other neighborhood. In some sections males are not purchased outright, but hired by the season for the use of members of the Association. Not only will the members be greatly benefited by either of these plans, but it will open up a large home market for much of the best breeding stock, which is now either sold to American competitors or sacrificed to the butcher, and thus in either case lost to the country.

I have just received a letter from Mr. R. F. Seymour, Essex, Ont., in which he says:—

"The township fair has been discontinued and stock animals are kept in place of an exhibition, which meets with the approval of the ratepayers and creates quite an interest. We have some thirteen pure-bred Shorthorn bulls in different parts of the townships of Maidstone and Rochester."

I believe seven out of ten thinking men believe that Ontario's Agricultural Societies should be re-organized, but we are all too busy or too modest to bring our views before the public. If we desire the Government of the day to take this matter up, we must make public opinion, or rather we must ask our neighbors to express their opinion. I do not write you in my official capacity, but simply as a citizen of Ontario, and as one who desires to see Canada and Canadian institutions in advance of all others. I believe that this is a public question worthy of your best thought. May I not have the honor of hearing from you at an early date. Letters sent to me here do not require postage. I enclose you an envelope. Can you send me a copy of the poster and the hand bill advertising your local fair?

Yours very truly,

F. W. HODSON.

Replies.

Society Stock did not give Satisfaction. "As a director of Glengarry Agricultural Society for over thirty years, I have," says James Clark, of Dominionville, "endeavoured to have township societies in the counties of Glengarry, Stormont, Dundas and Prescott done away with altogether. I have also tried to secure the organization of one agricultural society for all these counties. I am firmly of the belief that we have too many fairs, thus taking up a lot of time at a season of the year when corn and other field crops ought to have attention. Some years ago we brought several pedigreed bulls and Clyde and Percheron horses into this county. Somehow, however, these did not give satisfaction. There were local jealousies, and everyone seemed to think that he should have one of the animals at his own door. The greatest difficulty we experience in connection with fairs is in procuring proper judges, men who will award the prize to the animal rather than to the owner. *I entirely agree with the proposal to have judges sent out by the department, and would be willing to pay expenses of proper men, as they are the mainstay of our fairs.*

Suggestions in Letter apply in East Elgin. Walter C. Lewis, of Orwell, says that Mr. Hodson's suggestions are particularly applicable to East Elgin. He says that for years the county fair was held at St. Thomas, at the extreme eastern limits of the riding. The fair was a failure year after year on account of its location; the last year in which it was held there only ten per cent. of the prizes were paid. Then the show was moved to Alymer. "But as a director of the Alymer show," says Mr. Lewis. "I feel that too much of our money is spent for mountebanks and not enough in prizes to induce stock men to exhibit." This is a striking comment on the address delivered by Mr. Price. Mr. Lewis thinks there should be but one fair in East Elgin, and that at Alymer. "There is," he says, "a strong feeling for reform in our fair system, and if the Institute system could be planned so that one set of officials would serve it would result in much saving of time and money. *At present there is too much trouble in the selection of competent judges, and the plan proposed by Mr. Hodson is one I can most heartily endorse. Nothing would be so great a benefit as to have pure bred stock distributed throughout the Province. At present cattle are deteriorating in our locality, and any plan for improvement will have my hearty support.*"

Pure Bred Stock in Preference to Fairs. Allan Robbins, of Gainsboro says: "I quite agree with the proposal that the Government should assist agricultural societies in obtaining pure-bred stock rather than in holding exhibitions, as now Prizes in county agricultural societies should be limited to residents of the county. This would shut out the professional exhibitor, who goes from fair to fair and takes in the bulk of the prizes. County fairs, taken as a whole, are not what they should be, and I believe one of the chief causes for this is found in the professional exhibitor."

Small Shows have Small Prize Lists. Robert Sibbald of Annan says he thinks there are too many small shows, and that in his own township the farmers seem to have lost interest in the matter. Prizes are so small, he says, that people think it not worth their while preparing articles for competition, and that time is wasted in attending shows.

Wm. Harris, of Day Mills, Algoma, says at present the Institutes and agricultural societies work against each other, and both are injured in this way.

Amalgamate with Institutes and hold two fairs in each County. J. A. Nelles, Secretary of the Western Fair of London, says he thinks if an attempt were made to do away with grants to local societies, unless something else could be substituted, the farming community would make a vigorous kick. "The grants have been so long established," he says, "that it would be a most difficult thing to do away with these without antagonizing the agricultural interest. The idea of centralizing is a good thing, but it it strikes me it might cause trouble. The question would be. Where should the fair be located ? and local jealousies would be aroused in settling the question "

"I have thought for a long time," says Robert Buckley of Cheapside, " that there are too many small fairs. *If we could have about two good fairs in the county, and have them in connection with the Farmers Institute, as you propose, more good would result than under the present system.* Very few of the small fairs now existing are of any benefit. It would be a splendid thing if agricultural societies could be used as a means of bringing in pure bred sires. If once fairly started this system would soon show an immense improvement in the quality of our stock."

"*If all township societies were abolished*" *says Mr. R. A Havill of Rainham, "the majority now exhibiting at home would not take trouble to drive to the county town.* In that case some townships would be left without inducement to improve their stock. *On the other hand, that might be the means of prompting some of the more energetic men to bring in the best-bred stock for the benefit of others as well as themselves.*

Money wasted on Small shows. Charles Young, writing from Richards' Landing, gives the combined opinion of a few of the more enterprizing farmers in his section These farmers, he says, fully agree with what Mr. Hodson states, in saying *that much of the money spent in maintaining small fall shows is worse than wasted.* These small fairs are kept alive by interested parties, who make a point of raising a few roots and buying or borrowing from others, and also fitting up a few animals for the simple purposes of gobbling the prize money "*I have*" *says Mr Young "been secretary of St Joseph Island Agricultural Society since its first commencement, and I find great difficulty in having a good honest, square exhibition, and keeping educational features well in the front. By combining the Farmer's Institute and agricultural societies a long step would be taken towards remedying existing grievances*

Another voice for small fairs "*If the question of doing away with fall fairs in this district were put to a vote,*" *says Archibald McColl, secretary of West Elgin Fair, Aldboro, "I believe there would be a large majority in favor of keeping them on* At the Wallcetown and Rodney Fair the number of visitors was as large, if not larger, than at any previous show. This in itself would indicate that there is no growing feeling in favor of doing away with these exhibitions. If the only object of the fair were to give the farmer and his friends a holiday (in too many cases almost the only holiday in the year), and a chance to compare notes and discuss the year's results, the fairs would be worth all they cost. If the smaller fairs were abolished, the result would likely be that in a few years we would find only professional exhibitors, men who would exhibit with the sole object of making money or selling stock."

Town sports run the show. "Our agricultural associations, as now conducted, are too often controlled by the sporting class," says James Smith, Inglis Falls. "This is especially true where there is a large town in the electorial district. In North Grey there are generally from one to three farmers on the Board of Directors, and the rest are

residents of Owen Sound, chiefly sportsmen, and consequently there are three days of horse racing, intermixed with dancing and other sports The townships try to copy the county show, and one favorite form of amusement is competing for prizes for the poorest turn-out. This is simply disgusting. Making the directors responsible to a general superintendent would remedy this evil."

"It will require a good deal of agitation and education," says W. H. Gainer, Welland, "to carry out the proposal in anything like its entirety in this locality. *The uniting of the various Boards of Directors would meet with opposition. The purchase of stock by township societies would be a wise thing*

IN FAVOR OF TOWNSHIP SHOWS A. W. McGregor, of Desboro, says that *he does not agree with the suggestion that township fairs should be done away with. Where a good township fair is held, he says it is all right.* "In Sullivan township we have one of the best fairs in the County of Grey. This township fair last year was better than the county fair held at Owen Sound. I do not think it would be fair to abolish township organizations that have gone to the expense of buying grounds and putting up buildings, as we have done. If you put the shows in cities you put them out of the reach of the poorer people. At our last township fair we had something over one hundred pure bred Durhams, besides other breeds. No doubt many township fairs might be done away with, but where there are good fairs these ought to be helped, as it is the small fairs that help to keep up the big ones."

WHERE UNION IS ADVISABLE " *I quite agree with your views in regard to uniting the Institute and fair systems,*" *says John McKenzie Kagawong,* " *and especially of having the Department of Agriculture send expert judges to our fairs. We have more trouble over the judging of stock than over all other matters combined. I would also be in favor of societies getting male animals for use of members,* but as our total receipts amount to $260 we could not go far in that direction If all the fair associations on Manitoulin Island would unite they might do something more "

" *I think societies should make more effort in the direction of securing pure-bred stock for the use of farmers" says Alex. McLean, Carleton place.*

Our township fairs are purely agricultural," says W. A. Douglas, Onondaga, " *and my impression is that they will outlive the large fairs.* I consider they do a vast amount more good than the large ones, because it is there a stock breeder makes his first start and improves from year to year, until he can enter the big fairs."

" I am fully aware there will be a tempest in a teapot " says W. H. Sylvester, Burk's Falls. " If the present system is radically revised. Still, I think there should be a change. *The proposal to procure pure-bred breeding stock I believe worthy of consideration."*

TOO MANY SIDE SHOWS " There is a growing feeling that there is too much show and horse racing at the fairs," writes David Beatty of Chapman, " and this leads people from the question of agriculture entirely. Still, if you do not have some special attractions you cannot get a crowd. *I would be sorry to see local fairs discontinued, as in many instances they are of more benefit to the farming community than larger ones."*

W. T. Petrie, of Holstein, says he thinks there should be no racing nor circus amusements at agricultural fairs. These cost a lot of money and draw people away from the exhibits, and exhibitors, feeling they receive no attention at the hands of the public, are discouraged.

" I am a believer in agricultural fairs," says J. H Amos of Brinsley ; " but I am of the opinion that they are not managed as they should be. In McGillivray township the prizes are small ; and there are not as many classes as there should be. We allow no horse racing, gambling, or special attractions. You can hardly call large fairs agricultural exhibitions, because they are largely race meets and circus performances," Mr. Amos encloses a resolution adopted by the directors of his society, declaring that *it would not be to the public interest to have small fairs done away with.*

A PLACE FOR SMALL FAIRS. " We have had an exhibition ground in this village for about thirty years," says Wm. Elliott, of Comber, " and the society has about fifteen acres and two halls, and the debt amounts to only $300. *County fairs might suit the richer class, but not the farming class in general. Much more good is done by township fairs than would be done by one large fair."*

Stephen Kettle, of Ursa, says he thinks *township fairs stir up interest and emulation as nothing else would.* Not only the farmer but his wife and children take an interest in it. "If these were dropped, what would take their place?" he asks. "I had instructions from the society at one time to discover what a pure-bred bull would cost. The price ran from $150 to $200 and this put a damper on the matter."

Joshua Knight, of Elginburg, says he thinks it would be a good thing if the Farmer's Institute had control of the shows, as most of the fairs in that section of the country are carried on in a very poor way.

FEWER AND BETTER FAIRS. "Fewer and better fairs is a subject that has been quite freely discussed among the farmers here," says R. S. Webster, of Udora, "*Personally I am in favor of county fairs only.*"

"*There are too many small shows at the present time,*" writes J. W. Hodgson, "but if they were done away with a great number of the poorer class of farmers would be deprived of a show of any kind. Our society once tried buying pure-bred stock, but it was a failure. The idea of hiring never occurred to us. That might prove better.

THE GROUNDS AND BUILDINGS PROBLEM "*I more than agree with you when you say that seven out of ten thinking men believe that Ontario's agricultural societies should be reorganized,*" says William Pratt, Penetanguishene. "*I have failed to find one thinking man who does not think so.* But we must bear in mind that a majority of these societies own grounds and buildings which they cannot be deprived of. The proposal to amalgamate with the Institute has a great many objectionable features. It is almost impossible to hold a fair without suitable grounds and buildings, and as these would require to be permanently located, sectional jealousy would come in. *While I fully believe that township fairs should be abolished, I must admit that I have not found a plan to replace them.*"

LOCAL LIVE STOCK ASSOCIATION. "I have long believed that our district shows should be made movable," says Samuel G. Bergie of South River. "*If the local fairs could be made into live stock associations it would work wonders in the improvement of live stock.*"

"*Township fairs have entirely outlived their usefulness,*" says A. W. Cohoe of South Woodslee, *but instead of discontinuing township associations I would change these into stock associations similar to those we have in the Township of Rochester and part of Maidstone.* We have kept stock animals here to the full limit of our resources for years, and we have the reputation of having the best stock in the western part of Ontario."

CHEAPNESS THE ONE CONSIDERATION "I have" said J. I. Graham of Vandeleur, taken $11 more money in prizes than any man in the county. If I should speak from a selfish standpoint I might say leave things as they are; but when we take into account all that is spent to run each little fair, *I certainly think it would be better if we had no township fairs, but one good central exhibition.* It would be a great gain to the Province if people could be induced to use pure bred sires, but cheapness seems to be the one consideration."

THE SMALL SHOW MUST GO. W. J. Anderson, president of the South Lanark Farmer's Institute, writing from Smith's Falls, says: "*I believe the time has come for a radical change. Time and money are wasted in maintaining these small township fairs. Fewer fairs and better ones should be the watchword.*"

"*I am pleased to find most of the township fairs have died out,*" says David Barr of Renfrew, "*but I would be sorry to see the district ones given up. They are doing good work. Our fair is doing important work in the improvement of stock, especially sheep, swine, and poultry.*"

"*I do not think it would be advisable to do away with the agricultural township societies in this locality,*" writes Alfred Brunton of Tara, "*as it would have the effect of preventing many of our people from seeing a show at all.*

SMALL PLACES HAVE BEST SHOWS. Dr. A. MacKay, of Ingersoll says, "*I would not advocate cutting off township and village fairs, as my experience is strongly favorable to these. Our town, with a population of 5 000, has always a poor show, while Thamesville, Dorchester, Embro, and Otterville, small places of from three to six hundred, have enormous crowds.*"

EVIL OF LOCAL JUDGES. W. H. Evoy, of Bar River, says he is fully persuaded that a lot of the money paid out for prizes is useless waste. "In our prize list," he says, "one half of the money is given to useless objects. *I am heart and hand with you in the matter of securing competent judges for our fairs.* As secretary I have a good

opportunity of seeing the need of this. We select the best judges we can find, but frequently these are men who know comparatively little of the good or bad points of animals. Quite often, too, judges selected from a distance cannot come, and then we are obliged to select some one at hand, who knows every exhibitor, the consequence being jealousies and dissatisfaction. I have known exhibitors to take judges by the arm and walk them around the ring just before the judging commenced."

A. Barrow, writing from Bracebridge, *says he most heartily approves of the change proposed by Mr. Hodson.* "I have," said he, "frequently heard it remarked that if the Government would adopt some plan by which pure-bred stock could be brought in it would be a great benefit, especially in this section, where farmers have but limited means. *In Muskoka we have long felt the need of pure bred bulls. There has been a good deal of dissatisfaction in the matter of the selection of judges.* I am not very sure as to the advisability of amalgamating the agricultural societies and the Farmers' Institutes. I am afraid if the fees for the joint organization were the same as it is now for the agricultural society it would reduce our Institute membership."

Thomas Graham, writing from Port Perry, says: "I *think the Government should encourage district societies, especially those which have buildings, grounds, etc., of a good standard, as well as railway facilities. Stick to the fairs,*" says Mr. Graham, "*but on a larger scale*" *One of the points strongly emphasized by Mr. Graham is the need of securing more efficient judges.*

An Experience in Society owned Sires. "The townships of Southwold and Dunwich organized an agricultural society in 1854," says L F. Else, Boxall, "and in March, 1855, they purchassd bulls for use of members. This purchase was the cause of a great deal of good, the stock of the district being greatly improved. At one time the society owned some fifteen or twenty bulls. In course of time there came to be several breeders of pure-bred stock in the district, and stock-getters became so thick upon the ground that the society's animals did not get patronage enough to pay for keep. Besides, people came to look upon the society as interfering with private business. The society disposed of its stock and has been out of that branch for the last ten years. *We have discussed for a long time the proposal to abolish small fairs, and think this would be an injury, as the larger exhibitions would be in the hands of professional exhibitors.* At our fair we find there is an improvement in the exhibits from year to year.

"I fear those who pay the dollar subscription to the local fair do so more on the chance of making two or three dollars in prizes than for any other purpose," says Richard Cole of South River. "*Your suggestion for the appointment of expert judges by the Government, if carried out, would give great satisfaction.*

In Favor of the Township Fair. "*There is a very strong feeling in this section against doing away with the township fair,*" says W. H. Jarvis, Teeswater, President Culross Agricultural Society; "but we have one of the best fairs in the section. Besides, we have about $1,200 worth of property that would be thrown away if these small fairs were abolished. So far as pure-bred stock is concerned, this section is now fairly well supplied in that direction."

"*The proposal to abolish small fairs might suit very well in the older districts,*" says James Wiggins, Powassan; *but it is not adapted to this newly settled country. Our farmers are taking a lively interest in the local fair, have purchased five acres of land, and erected an agricultural hall upon it.*"

"Small local fairs suit us best," says W. J. Varcoe, Roseneath, "because the large towns are too much to one side of the territory to be available. *What is needed is the enforcement of the present Act, rather than the revision of it.* Horse-racing and gambling are carried on at too many shows."

Speeding and Professionalism. "*Many of our farmers will not show because of the professional exhibitor,*" says Albert Pay, St Catharines. "Speeding in the ring is taking a prominent place, and large purses are offered These purses are mainly taken by ringers. This is not the purpose for which fairs were created. *I enjoy a good horse race as much as many others, but do not think an agricultural ground the place to hold it. Two or three of our small fairs are kept going by a few interested parties, who wish to have some money spent in the villages on fair days.* We have in this district some very fine improved stock, whose owners would not care, after going to the expense of getting this stock, to see the

Government oppose them in their own business. These men should be encouraged, as they are a great benefit to the community. If their stock could be bought and used by the association to start with, some of these objections would be overcome."

ADVANTAGE OF THE COUNTY SYSTEM "*If county fairs are properly supported by Government grants,*" says Henry Roberts of Brampton, "*so that larger prizes could be given, thus inducing greater competition, the object for which fall fairs were intended (namely, the breeding and production of first class stock and produce), they would be attended with much larger success than at present* By having only county fairs the Department of Agriculture could more easily send expert judges. *It would be wise to let Institutes carry on their work seperate from the fairs.* I consider it an impossible undertaking for associations to introduce pure-bred sires, as there are so many classes of these sires The better plan would be to provide for registration of sires, and allow none but those registered to serve."

AMALGAMATION FAVORED. "I have for some time recognized the fact," says J. G. Foster of Moira, "that agricultural fairs have failed as educators. *I believe that by uniting the Institutes and fairs money and time could be saved.* One of the principle difficulties I see is that the time when it seems necessary to hold fairs is a very busy season, while the winter appears to be the only time people can get out out to attend meetings. *One of the greatest shortcomings in connection with fairs is the lack of competent judges. I am heartily in favor of the idea of co-operation in procuring the best sires*"

"*A union of the fair and Institute system, so far as the county or riding is concerned, would be all right,*" says Walter Scott, Belgrave. "*But how about the township shows? Some of these are much better than the riding exhibition, and were it not for the local shows many of our people would never see an exhibition of any kind The idea of the department sending out judges for each class of stock would be very acceptable, and I think would work well*"

AN EFFORT AT AMALGAMATION. "*We certainly have too many fairs,*" says W. E Pollard, Bowmanville, "and I am afraid the object for which these were established has been lost sight of *There are too many professional exhibitors.* A few years ago we held a meeting of the three township societies to try and arrange for one exhibition in the county, but local jealousies caused our efforts to come to naught. *We should use our exhibitions for the exchange of good stock. In no way is money being lost so quickly as by using scrubs. It would be all right to unite the Institute and agricultural societies if the head were not too autocratic.*"

WHERE SOCIETIES OWN ANIMALS "There are far too many one-horse fairs," says one correspondent, writing from Balderson. "*Two of our local agricultural societies use their funds for maintaining pure bred males.* Drummond Township Society, of which I am secretary treasurer, has done a vast amount of good in this way. *They usually keep two bulls, one Durham and one Ayrshire; two rams, one Oxford and the other Leicester; besides two boars* Quite a number of farmers within the bounds of this township now have pure bred herds of the best quality. Burgess township follows along the same line. We have too many live stock associations, and the Government at Ottawa should open herd books, which would be suitable for the whole Dominion."

THE JUDGE IDEA PARTICULARLY GOOD "*The reforms you are proposing are just what I have been looking forward to for several years,*" says J. H Elliott, Thessalon. "*The proposal to appoint outside judges is particularly good. Outside men coming from a distance would show no partiality, and would give better satisfaction all round. Such judges would be able also, to say just what sort of stock should be raised, and the boys in this way would be interested The latter might obtain lessons which would in after life make them much better farmers* The proposal that the agricultural society should bring in pure-bred stock is a splendid one, as there are comparatively few private individuals who can afford to go to the expense."

"I am quite convinced that there is need of a thorough reorganization in this matter," says James Coutts, Midhurst. "*There are too many fairs,* and they are not always conducted in a way calculated to impart very much information."

"I think the proposal to amalgamate the Farmers' Institutes and agricultural societies under one management is on the right line," says James Lochore, of Thompson.

"Even in our new country the local fairs are too close together. Fewer fairs and better ones would be of more public benefit."

A Specimen Judge. "I have been intimately connected with county fairs for upwards of fifty years, both as an officer and exhibitor," says the secretary of the Osprey Agricultural Society, Feversham, "and I long ago came to the conclusion that there was something radically wrong with the present system From my experience *in watching judging at county fairs, I have come to the conclusion that it is nothing more or less than a farce.* This is not the fault of the societies, as they honestly try to get competent judges, but this seems to be impossible in a great many townships I *have seen judges award prizes offered for a Shropshire ewe lamb to cross from a Shropshire ram and a Leicester ewe, although an almost perfect type of pure-bred Shropshire lamb, from imported stock, was shown in the same ring, this pure-bred lamb afterwards being sold for $40.* Still, this pure bred animal took no prize, because, as the judge said afterwards, *it had not such long wool as the other.* This is but an illustration of what you will see at almost every county fair. *The proposal to amalgamate the Farmers' Institute with the agricultural societies would in a great measure remedy this fault, while the sending of competent judges by the Department of Agriculture would be of incalculable value.*

The Pure-bred Stock Idea. "In our Institute district," said Captain John Douglas, of West Bruce Farmers' Institute, Tara, "*the township fairs are doing good work, and are maintained as purely agricultural exhibitions.* In many electorial district shows, on the other hand, there are many objectionable things in the way of fakes, horse racing, etc. This speeding in the ring causes young men to take greater interest in a fast horse than in improving other lines of stock on the farm. *I would not approve of doing away with local shows where they are properly carried on,* because that is where a new beginner gets his first encouragement. In larger shows the prizes are all taken by people who are thoroughly up in the business—prizes in many cases being given for animals which have been fitted up for show purposes, to the detriment of their breeding quality. *I have no doubt that in many localities it would be a great benefit for the old societies to do away with the shows, and devote their means and energies towards the improvement of all kinds of stock, and even for the Institutes to co-operate in this work.* By co-operation under proper rules an immense benefit could be conferred. Many years ago our county society had four pure-bred bulls placed in different localities, for the use of members. The result was a great benefit to our people. By changing the animals about from one locality to another, it was not necessary to sacrifice them just when they were coming to their prime. That is one great evil under the system of private ownership. Animals are generally purchased at about twelve months, and immediately put to service for two years. In nine cases out of ten they are sold to the butcher just at the time when they are coming to be really useful for service. A few years ago I purchased a son of the noted bull which won the championship at Chicago. I kept him nearly three years. He was the finest animal ever owned in North Bruce. At three years, in fair condition, he weighed 2,340. He more completely combined beef and milking qualities than any animal I ever knew; and yet at that age I had to sell him to the butcher. Many people say that was the greatest loss this locality ever sustained. *I have talked to a great many of our people, and they are strongly of opinion that the Government, through the agricultural societies, Farmers' Institutes, and perhaps municipalities, should give grants to assist in maintaining pure-bred sires for the improvement of stock.*"

"*I think if the idea of securing pure-bred stock could be carried out properly it would be of greater advantage than the local fairs,*" Says J. D. Moore, of Queensville.

Expert Judges. "*We have improved our show fifty per cent by getting expert judges,*" says Isaac Lennox of Wiarton. "There should be only one member from each family; not a dozen families running the entire show and gobbling up all the grants. The experiment of keeping male stock proved a failure in this locality years ago."

"I have thought for some years that the small local fairs have to a great extent outlived their usefulness, says Alex. Wilson of Castleton. "Our local fair has been quite successful of late years, but it has required a good deal of effort on the part of the officers to make it so. *The idea of uniting the fair and Institute systems, strikes me as a good one.* One of the difficulties we have to contend with is the securing of competent judges The plan for buying or hiring pure-bred sires ought to meet with general favor."

WOULD PROMOTE ECONOMY AND EFFICIENCY. "I have thought for some years that the smaller township fairs should be abolished, and superseded by something on a larger scale says R. H Knowles, of Hespeler "*The plan you suggest for amalgamating the fair and Institute system is one that had not occurred to me before, but it seems to be one that should commend itself as a measure of economy and efficiency. As an educator, the small township fair is a failure and not worth the money and energy expended.* The adoption of the plan for bringing in pure bred sires through agricultural societies would prove of inestimable benefit to the country."

FIRST STEP TOWARDS IMPROVEMENT. "I believe that the first step to be taken to improve our agricultural exhibitions is to reduce the number of these exhibitions," says Major Hood of Guelph. "In the second place, I would not allow any exhibition to draw Government grants which throws away its funds on so called special attractions. *I would make the exhibitions strictly agricultural and industrial. One good show in each Institute division will be quite sufficient. The plan of local associations hiring or buying first-class males would, if adopted, certainly prove the means of enabling the average farmer to improve his stock at less cost than now.*"

"*I would be in favor of the amalgamation of the Farmers' Institutes and agricultural societies, and of giving them liberty to hold a fair or not, as they see fit,*" says S. Martin of Princeton. "*By sending expert judges the Government would certainly be the means of raising the grade of the exhibits. I consider your suggestion for bringing in pure-bred sires all right as regards horses, but do not think it would work well with other lines of stock*"

THE SMALL SHOW USEFUL IN THE NEWER DISTRICTS. "In these new parts the small show is still a useful institution," says Wm. Clarke of Huntsville. "But I do think we have too many of them. I do not think it would be wise to introduce the system of owning or hiring pure-bred stock up here; more educational work would be required before that idea could be carried out." Mr. Clarke mentions one illustration of the value of co-operation in his section. In 1883 a bull was purchased for $50 cash and a note for another $50. Ten men put up the cash required (five dollars each), and in return got a guarantee of four free services of the animal purchased. "The animal," says Mr. Clarke, "ran two years, and you can see the results from that start to-day. *Since then we have never been without a good pedigreed bull. At first many people would go past this animal to get a cheap service at fifty or seventy-five cents rather than pay a dollar for a good one, but when the buyers came to buy the product of these bulls then producers found the mistake they had made, and now many are seeing the advantage of using a good sire.*"

FOR A MOVEABLE FAIR. Henry Arkell of Teeswater says he has long felt there are too many fall fairs, and that too much time is taken up in attendance of the same. "There is little profit in this," he says, "at a season of the year when farm operations require very close attention. *Within a radius of sixteen miles of where I am writing nearly a score of fall fairs are held—too many, in my opinion, by sixteen.* I think it would be well to divide the country into districts of about the area I have mentioned. In such districts I would provide for the holding of shows at four different points; the show to be held at one point one year and at another point another year, and so on, until the four points were covered. This would give every district an opportunity to get up a good show. *I think the plan to amalgamate the fair boards with the Institute system would be a good thing. We would then have more efficient officers than we have now. I fully concur with the proposal that the Department of Agriculture furnish expert judges on application.* Objections will come from certain parties. Less enterprising men will say there is no use exhibiting, because more progressive men will take all the prizes and the less enterprising ones will stay at home. This would be unfortunate, as it is the non-progressive we want to benefit. To induce them to take part in the exhibition it seems to me some change should be made in the prizes Either more classes should be provided, so that these men will not come into competition with the experts, or else the latter should be asked to forego the prize money, being satisfied with the honor. By having expert judges we would do away with the petty jealousies which often occur, and fix higher ideals as to the sort of stock that should be raised. The suggestion that societies purchase pure-bred sires is one that I heartily agree with. I have frequently advocated the same thing myself. This would cause a great saving in individual outlay, and would be a means of obtaining a much better class of males for use all over the country."

FINANCIAL INTERESTS IN THE WAY. "*The financial position of many agricultural societies is an obstacle in the way of the improvement you suggest,*" says Jonathan Cross, Caledonia

Springs. "But if the indebtedness of the societies could be met by some other arrangement I do not see why more modern and progressive organizations should not be substituted. The necessity of doing away with small township shows is apparent to all thinking men."

"When we started our society I had great hopes that we should be able to accomplish something of value to farmers," says S. C. Gardiner of Iron Bridge. "Some of us subscribed and purchased a Holstein bull, but the man who cared for the animal did not handle him very well, and much dissatisfaction was thereby caused. Then, again, the bull proved not to be of the right breed for us here, and this caused further trouble. *I think sometimes that the money granted by the Government to these societies is just so much thrown away. Certainly there should be fewer societies, with shows not closer together than within twenty miles of each other. I would like to see pure-bred stock animals kept instead of holding an exhibition.*"

Much in Favor of Amalgamation. E. Hawthorne, writing from Warsaw, says: "*I am very much in favor of amalgamating the Farmers' Institute and Fair associations. It appears to me a waste of energy to maintain two institutions when one strong organization will meet all requirements. In our electoral district, the offices of president of the agricultural society and president of the local Institute are filled by one person.* There are no less than two or three agricultural societies in the district in which I reside, but we have had no show for years, while we do own and keep pure-bred males for the use of members. This has been of inestimable benefit to the people of this part of the country. When holding fairs we were invariably in debt, and it was hard work to secure the fifty members in order to secure the Government grant. At present we have nearly double that membership, the treasury always shows a surplus, and our stock will compare very favorably with the original 'brindle cow.'"

Obstacles in the way of Amalgamation. "I have been of opinion for some time that we have too many small fairs," says O. L. Fewster of Conover. "The difficult problem is how to overcome the petty local jealousies that would stand in the way of amalgamation. Unless this can be accomplished by legislation, it will perhaps never be accomplished. *It would be a good idea to amalgamate the Institute and fair systems, but there would be difficulty in this, too, as the Institute is for the whole country, while agricultural societies are local. The plan you propose for obtaining pure-bred males is commendable, as well as feasible.*"

"One fair in each electoral district would be quite sufficient," says Charles O'Reilly of Norwood. "*The proposal to amalgamate the Institute and exhibition associations meets with my hearty approval.* Expert judges sent from outside would give better satisfaction than the present system."

Township Shows vs County Shows. "My opinion is," says Alexander Garvie, secretary of the Derby Agricultural Society, Kilsyth, "that the township shows, when properly conducted, are of far more benefit to the community at large than the electoral district or other larger shows. My idea would be to have the local shows in each township first, and then, after these were over, to hold the county or district show, when leading farmers from each township could compare their exhibits. Our township of Derby is ten miles long and six miles wide. We have a society with a membership of 190, and offer about $500 in prizes. We allow no side shows of any kind, but put up a purely agricultural exhibition. At our show farmers meet annually and compare their stock and produce, and select their breeding animals. I do not think over fifteen or twenty of our members are united with the District Society. The latter seems to be trying to unite an agricultural show with a circus, and the greater part of the attention appears to be paid to the entertainment part. This seems to be the case more or less with all the larger shows. These larger shows are held in villages or towns, and the principal object seems to be to draw a crowd, the result being that about the only parties benefited are the hotelkeepers and merchants. *The idea of having the Government send judges to local fairs is a splendid one.* This is just what we want, as township societies are not able to pay judges to come from a distance to serve simply one show. The money could not be spent to better advantage by the Government than in this way. *I think it would also be an advantage to have the Institute and Agricultural Societies amalgamated, as expense would thus be saved.*"

Stock Steadily Deteriorating. Wm. Spong, of Baysville, says: "I have felt for some time that the farmers are not making enough of their advantages in connection with agricultural societies. Everything is lost sight of but having a show, and the more

solid advantages of using pure-bread stock are neglected. Some oppose the purchase of pure-bred stock by the societies on the ground that this would interfere with private enterprise; but the present system of private ownership is resulting in our stock becoming poorer every year. *I would like to see at least a part of the funds of our societies used in the purchase of pure-bred stock, but the majority of our members object to this change.*" Mr. Spong, speaking for his section, is rather in favor of small shows. It is impossible, he says, in his section, where there is much bush and many hilly roads, to take cattle long distances, and for the majority it would be impossible to show stock at all if they had to travel fifteen or twenty-five miles to do so. It is, he says, the small farmers who need education, and he is not sure this object would be attained by having fewer, even if better, shows. With fewer shows he thinks professional showmen would be encouraged, to the detriment of the average farmer. "Perhaps," adds Mr. Spong, "*the joining of the agricultural societies and the Farmers' Institute under one management would infuse new life into both. I should like to see it tried.*"

Only one Pure-Bred Bull for a Township. "While I do not like to see our township fair done away with," says A. McGillivray of Murillo, "I must admit the truth of what you say, that much of the time and money spent in maintaining and attending many of the small fairs is worse than wasted. The absolute necessity of securing the service of pure-bred males is to me very apparent. I am afraid that the township of Oliver is very much behind in this respect. I know of but one pure-bred bull in the township."

"*The educational features of the small fairs are,*" says James B. Tiernay, of Blyth, president of the Morris Agricultural Society. "*for the most part lost sight of, or else are made subservient to other attractions.* While these attractions assist in drawing a crowd, they have very little effect in advancing the interests of agriculture. A great deal of money and time are spent solely with the view of affording an outing for the people of the country, and providing profit for the business men and hotelkeepers of the town. The tendency of shows is more and more trending in the direction of making the race track and circus performances the chief feature. Some shows that were once conducted on purely agricultural lines have gone to the wall for lack of patronage. It would be well if some of the small shows could be amalgamated with the larger ones. The purchase by the agricultural societies of pure-bred sires would probably meet with a fair measure of success in counties where the raising of good stock is not so carefully looked after as it is in Huron."

Incompetent Judges. "You have entirely voiced my feelings," writes W. E. Streatfield, of Emsdale. "I have been secretary of agricultural societies for years, and I am coming more and more to the opinion that *these shows are not the benefit to the townships they should be.* Bickerings and bad feelings are raised by supposed incompetent judges. *With district fairs and outside judges sent by the Department, as well as Institute speakers, we would have an immense improvement.*"

D S Cameron of Ailsa Craig says he would not like to see the fall fair discontinued. "There is no need of the societies taking hold of pure-bred bulls here, as local breeders supply the need."

"I think in time the small fairs will drop out themselves," writes R. Clay of Katrine. "If railway rates were reduced at fair time, the difficulty of reaching central points would be removed, and better shows would be held."

John M. McNabb of Southampton, as president of the North Bruce Agricultural Society, says: "I am sorry to say that although our board of directors are all progressive farmers, our fairs are losing interest, especially to the younger people. If their views were carried out the show would degenerate to the nature of a circus."

Expert Judge Idea Approved. "*I believe great good would result from having uniform judging carried on by experts sent by the Department of Agriculture,*" says R. A. Lehmann of Orillia, secretary of the East Simcoe Farmers' Institute. "*The pure-bred sire plan might also be tried.*"

"I quite agree as to there being altogether too many small shows," says S S Tuttle of Oriel, secretary of the East Oxford Agricultural Society. "This causes a loss of valuable time and waste of money. The prizes are too small to pay exhibitors for attending. It is high time an entire reorganization was effected. *It would be much better if there were only one exhibition in each electoral district.* Then we could have an exhibition that would be a credit to the county instead of having half a dozen that are a discredit. If

we had $1,600 for one show in Oxford, the banner county of the Province, we could put up an exhibition second to none west of Toronto; but, with so many small towns, all are below the standard that should be attained. The trouble is that each small village wants to have a show of its own, and these are not able to put up prizes sufficient to make a good exhibition.

THOROUGH REORGANIZATION CALLED FOR. One of those from whom information had been received is C. A. Mayhew of Thamesville, secretary of the East Kent Agricultural Society: "I think," said that gentleman, "*that it would be a good idea to have the Farmers' Institute and the Agricultural Society joined together.* The Agricultural Act itself should be thoroughly revised and our present fair system reorganized. When canvassing for members for our Agricultural Society I hear a good many complaints from farmers about their being too many small fairs. In our county, shows are within eight to ten miles of each other. There are too many for the people to keep up. *Some societies, instead of trying to build up the agricultural part of the fair, are trying their best to make race meets of the annual event, paying about as much for races as for all other prizes.*"

ONE FAIR FOR A RIDING SUFFICIENT. "I have long been satisfied," says George Binnie of Bunessan, "that there are too many fairs in Ontario. There is so much subdivision of funds among the riding and township fairs that the usefulness of the whole expenditure is to a great extent lost. This is true even where the money is put to the best possible use, which very often it is not. *One exhibition in each riding is quite sufficient. I am somewhat doubtful as to whether it would be wise to amalgamate the fair and institute system.* If township associations are to exist at all, they could not be better employed than in procuring and keeping pure-bred sires for the use of members."

TOWNSHIP FAIRS USEFUL ONLY IN ISOLATED SECTIONS. Wm. Collins, who is secretary of the West Peterboro Farmers' Institute, as well as the local Poultry Association, says: "I am fully in accord with the opinion that a great amount of money is wasted in township fairs. It would be better to give it to one good county fair. One should be sufficient; certainly one for each riding is an abundance. *Township fairs, save in isolated places, are of little use.* To show to what extent overcrowding has gone on, I may say in a radius of four miles from the town of Peterboro there are four small township shows, while the riding exhibition is often run at a loss for the want of better patronage. The whole Agricultural Act needs revising, and in this connection more recognition should be given to the poultry industry. Provision should be made in each county for an exhibit in the winter season of poultry, alive and dressed. I would not care to give an opinion as to agricultural societies owning or buying up sires. There will be no difficulty in getting good animals under the present system, if farmers will only pay a reasonable price for the use of same. *I am not struck with the suggestion of amalgamating the Agricultural Societies and the Farmers' Institute.* I cannot see that this would be any saving. I think it better to let each do their own work. I am sure amalgamation would result in complication, as some would want all institute and others would want the major part exhibition.

OPINION OF AN INSTITUTE. J. P. Fox of Winchester, before writing his letter, submitted the matter to twenty representative farmers at an Institute meeting. *After considerable discussion a resolution was passed declaring that in the opinion of the meeting it would be in the interest of agriculture in the Province to amalgamate the agricultural societies and Farmers' Institutes with the object of holding one central exhibition in each county or district, or purchasing pure-bred stock as the members should decide.* "Of course," says Mr. Fox, "there would be difficulties in carrying out this scheme, because many of the township societies have expended large sums of money on buildings and grounds."

"I fully believe with you;" says J. C. Hanley of Read. "*that the time has arrived when the local fair and institute system should be amalgamated. The small local fairs have almost ceased to be educators, but are merely occasions for social gatherings* and for affording an opportunity for parties living near the fair grounds to divide the greater part of the prize money; and this without exibiting anything worth seeing."

SPEND THE MONEY ON STOCK. "We have three fairs within 12 miles of Huntsville," says Joseph Kitchen. "This is altogether too many. *I have talked the matter over with directors of our Institute and Agricultural Society, as well as with several other farmers, and nearly all agree that fewer fall fairs would be better, provided the money so saved were spent in pure-bred stock. Such animals are few and far between in this district.*

"I have always maintained," says James Smith of Sprucedale, "that there are too many fall shows." Mr. Smith has the same idea as Mr. Arkell, namely, that shows be reduced in number, and that the larger fairs thus provided for should not be held in one permanent place, but moved about from town to town. *Mr Smith is strongly in favor of the scheme of securing pure-bred males by means of Government assistance.* "It would be hard in this back country for individuals to undertake to purchase such stock," he says.

Township Fairs for Township People. "I think," says James Begg, of Gravel Hill, "*that every township should have its own fair, and that this should be solely for the township, outsiders not being allowed to compete.*" Mr Begg's reason for saying this is, as others say, that professional prize-takers go about from fair to fair and scoop in the prizes. But he says township fairs should be continued, because the ordinary farmer cannot take articles for a long distance, and the back country cannot compete with the front. "*I would,*" *he says,* "*do away with county fairs and continue the township fairs.* I should do away with all horse-racing, balloon ascensions, and the like. If a show can be carried ont without an entrance fee at all, all the better. I attended a fair this fall which had a circus performance at one corner, a merry-go round at the other, racing in the ring, and a large display of house plants. There were some very good animals on the ground, but nobody was looking at them, the crowd having other attractions."

Good Roads of More Importance. John Murphy, writing from Silver Hill, says he thinks there is a waste of public money in keeping up so many small societies. "All these," he says, "draw money from the Province, and I don't think the expenditure of this money does much good. The urgent need now is better roads leading to market towns. The leading roads of Ontario are in a horrible condition at this time of the year (December 15). *If the money used on shows was devoted to making better roads, I think the public interest would be better served.*"

Wipe Out Useless Bodies. J. H. Delamere, of Minden, says he has been an active member of agricultural societies for over forty years, and for more than half that period a director or officer.

"I certainly think," said Mr. Delamere, "that the time has arrived when *a reorganization of local agricultural associations should take place*—a reorganization by which useless bodies now in existence should be wiped out, and those doing useful and progressive work fostered. I have spoken very freely on this subject to many agriculturists. I do not find that all agree with me, but the most intelligent, liberal-minded, and progressive farmers are mostly in favor of such a change. One of our greatest drawbacks in connection with shows is a lack of competent and disinterested judges. I think if the government supplied pure-bred males as part of the assistance granted to agricultural societies in districts like ours (Haliburton) and kept these animals systematically moved about, under the direction of judges who could rearrange the matter every season during the round of local shows much benefit would accrue. *Judges covering a circuit of fairs as you propose would be just the right men to determine where these animals would be of most service.*"

Township Better than District Fairs. "In East Grey," says J. W. Patton of Rocklyn, "township fairs are very much better than the district fairs. The Great Northern at Collingwood was a failure, and the fairs at Owen Sound and Flesherton were no better than our township shows. At Euphrasia township show there were 168 entries for horses, and I question very much if any of the so-called larger fairs had as many cattle, sheep and swine as we had. *I do not favor withdrawing Government aid from these local shows, because in many cases farmers cannot afford to take their families to the industrial or other fairs at a distance.* Besides, small farmers could not drive their stock forty or fifty miles to large centers. As to your suggestion about pure-bred stock. I fail to see how such animals, supplied by the government, or owned by agricultural societies, could be handled without incurring heavy expense. There might even be dishonesty on the part of the men to whom such stock would be entrusted."

No Grants to Fakirs. "*I am not in favor of the abolishing of the township agricultural fairs,*" says John McKee, secretary of the South Oxford Farmers' Institute. "There is no doubt that the management of some of these could be greatly improved from an educational standpoint. "*Any society that allows fakirs on the grounds should forfeit its grant. If properly qualified judges were selected, who could address the people and explain their reasons for fixing the awards, it would be a step in the right direction.* If township fairs were abolished,

many a farmer's son and daughter would never see an agricultural exhibition at all, and would thus be without an opportunity of viewing specimens of the different lines of live stock. *Rather than abolish the township show I would abolish the county show* Farmers have too few holidays now, and if the township fair were abolished they would have fewer still I am not in favor of society or syndicate ownership of pure-bred males; that has been tried, and shareholders have been only too glad to sell out to an individual. *I cordially approve of holding sales of pure-bred stock at fairs.* This would be a great benefit to the country. Societies in awarding prizes should not indiscriminately offer the same premiums both for dairy and beef breeds. They should fix their prize list according to the conditions existting in the locality. In our township of North Norwich, for instance, I do not know of a herd of Durham cattle, yet the society offers the same prizes for Durhams as for Holsteins or Ayrshires. The result is that a Durham breeder comes in from another county, scoops in all the money, and there is no benefit whatever to the locality. *Our section is noted for three things—bacon, dairy products, and fruit. In such a section the prizes should be so adjusted as to foster these industries.* I do not agree with the statement that it would cost no more to administer the combined fair and Institute system than it now costs to administer the institute system alone. I am the only officer in our Institute who gets a salary, if the sum of $25 per annum can be called such, and I am mighty sure I would not undertake to manage a fair for nothing."

Little Ones Kill Big Ones. "I am not in favor of the small township fairs, as they almost kill our larger ones," says James Chinnick, president of the Peninsular Fair Chatham. "If it were not for the secretary-treasurers running these shows for what they get out of them financially, and the small grants of the Government and County Councils, they would soon cease to exist. *I think your plan of purchasing pure-bred sires instead of holding these small fairs would be a good one, and would meet with general approval.*"

"Although I have been secretary of an agricultural society for several years," says F. V. Gunther, secretary Wallacetown Agricultural Society, Oos Hill, "I do not think the society has done much good, especially in the matter of live stock. *Better live stock is what we want*, and I think your proposition to this end is a good one. My proposition would be for each society to go into only one line of stock each year, say cattle one year, horses another, and so on. In a short time we would in this way obtain a complete stock of pure-bred sires.

Expert Judges and Amalgamation. "I have had many opportunities of observing the way our local Agricultural Society has been managed," says John Wilson of Utterson, "and I long since came to the conclusion that the whole thing is nothing but a humbug; time and money are wasted without any good being done. If the grant now given local fairs were given to county fairs some good would be accomplished. It is almost impossible to get expert judges for local shows, and the result is generally dissatisfaction and petty jealousy. *I believe the proposal to amalgamate Institutes and fairs is a good idea.*"

"I have," says Wilson Ransom, Elora, "been a director of both township and district shows for a number of years, and I find that our local show is of more value, and gives more instruction to new beginners than the larger one. We have numbers of families who do not attend the district fairs at all until after receiving a few prizes at our local fair. *But you are on the right track in regard to getting in pure-bred stock, and I hope you will succeed in your undertaking.*"

The Social Side of the Question. In a great many of the letters great emphasis is laid on the importance of the social features of small shows. These shows afford people in the township an opportunity of meeting together for social intercourse—almost the only opportunity of the kind afforded during the year. This and the fact that the township show seems in the opinion of many to give the small breeder a chance to make a start, are the principal arguments put forward in favor of maintaining the present system.

Several of Mr. Hodson's correspondents in the eastern part of the Province make special reference to the poultry industry. That industry seems to be a very important one in the eastern section of Ontario. It is so important that it would seem, that while nothing should be done that would weaken the poultry side of the winter fair, as if it would be well to make arrangements for a special poultry exhibition for that part of the Province lying east of Toronto.

PROVINCIAL WINTER FAIR BUILDING, GUELPH, ONT.

This beautiful stone building covers one acre of ground and contains on the first floor a special department for dairy cattle ; a lecture room ;"a boiler room ;"a killing room and a room for hanging the carcasses. Besides the accommodation for the live stock there is also on this floor a large show ring provided with seats on each side. Upstairs is devoted to poultry and last year there were over 2,000 entries in this class. About 11,600 persons were in attendance, of which number 1,518 were affiliated members of Farmers' Institutes. $7,000 were offered in prizes in all classes. The Fair for 1901 will be held December 10th, 11th, 12th and 13th.

A Model.

SIXTH ANNUAL REPORT

OF THE

COMMISSIONER OF HIGHWAYS

ONTARIO

1901.

(PUBLISHED BY THE ONTARIO DEPARTMENT OF PUBLIC WORKS.)

PRINTED BY ORDER OF

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To the Honorable F. R. Latchford,
Commissioner of Public Works.

Sir,—I have the honor to submit to you the following report for the year 1901, being my Sixth Annual Report on Road Improvement in Ontario.

I have the honor to be,
Sir,
Your obedient servant,
A. W. CAMPBELL,
Commissioner of Highways.

Parliament Buildings,
Toronto, Ontario, 26th February, 1901.

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SIXTH ANNUAL REPORT

OF THE

COMMISSIONER OF HIGHWAYS

THE GOOD ROADS MOVEMENT.

The road question is one which is being very generally considered throughout Canada. Good Roads Associations have been formed in almost every Province, those most active being in the Provinces of Ontario, Quebec, New Brunswick and British Columbia. While in every Province, more or less consideration has been given to the subject by the Provincial Governments, Ontario is the leading Province in this movement, both as regards an active public interest, which has been organized in good roads associations, and in Governmental action.

A Stone Road Built by Welland.

The roads of the Province were the chief public work until the time of railway construction, when Government aid, previously directed to the common highways, was largely withdrawn and applied to steam railway construction. The period of railway construction having reached its stage of comparative completeness during the past couple of decades the public has awakened to the fact that the common highways have not received the consideration from local authorities and the people generally which should have been given them, and that the system of constructing and maintaining the roads, in which statute labor is the chief factor, has not been changed in keeping with modern requirements.

For many years it has been the policy of the Government to open up, as required, in the newer districts of the Province, colonization roads, the appropriation for this work having amounted to about $100,000 annually.

It is, however, in the older section of Ontario that the movement for good roads

has had its modern significance. The first definite step was taken in the year 1894, when the Good Roads Association of Ontario was organized, a large number of delegates attending this first convention, representing county councils, township councils farmers' institutes, dairymen's and other associations. The plans and purposes adopted by the association and embodied in the constitution were the following :

1. To combine as far as practicable the efforts of all persons engaged in the work of road reform.

2. To awaken interest in the subject among the people at large.

3. To receive, publish and discuss any well considered plan for local, provincial or national action or legislation.

4. To aid in providing a proper road exhibit and instruction in roadmaking at Farmers' Institutes, County, Dairymen's, Creamery and other association meetings.

5. To establish the Association on the broadest possible basis throughout the country, so that its influence may be of weight in any direction in which it may ultimately be thrown.

6. To obtain and spread among the local associations full information regarding recent legislation for road improvement.

7. To obtain and publish full information regarding methods of road-building, as practised in various parts of Canada, and other countries.

8. To procure and furnish the local associations, at reduced prices, all valuable publications on the subject of roads and road legislation.

Two years later, in 1896, the Government of the Province, recognizing the importance of the work of the Association, appointed a Provincial Commissioner of Highways, whose duty, as defined, was to give the people of Ontario practical information on the best methods of road construction. This was, and still is, done by issuing bulletins and reports, by addressing public meetings and conventions, and by taking advantage of such opportunities as occur to contribute to the various journals and the press generally. The chief duty of the Commissioner, however, has been to visit municipalities which request his services, examining the roads and the materials available for their construction, discussing the question with the council, and usually addressing a public meeting. Under his supervision, short sections of road are built as models, all his services in these matters being without expense to the municipalities.

A local assocation has been formed in the eastern part of the Province, which has been very active and is achieving excellent results. One of the chief features of its work has been the organization of a good roads train carrying a complete outfit of road-making machinery. Operations were confined to a small section of Ontario, about ten counties, in which model sections of roads and culverts were constructed.

Older Ontario is largely agricultural in character, being in this respect exceptionally fertile and prosperous. The result of this is that numerous towns have sprung up, more or less manufacturing, but largely dependent upon the agriculture of the surrounding country for support. The effect is to impose certain conditions upon road construction. Roads approaching railway and market towns are, in many cases, heavily travelled by vehicles, loaded with farm produce, and receive the traffic from a considerable area. Beyond these are other roads of moderate travel, receiving the traffic from a smaller district ; and beyond these again are the roads which accommodate but a few farms. As a result, every class of road is required, varying from the carefully designed macadam roadway to those which are merely the best that can be made out of a common dirt road. The intermediate class is the one which merits and receives the greatest consideration in Ontario, owing to the fact that its extent is much the greatest of any of these classes. It is the class of road in which the average Ontario farmer is chiefly interested, as it is the road which passes his own door.

It is from this standpoint that the question of road reform in Ontario has been approached. The general movement has been to secure the best class of road of an ordinary type for common farm traffic. In pursuance of this, the benefits of good roads have been urged. It has been pointed out that good roads from a business standpoint

will improve the conditon of all classes of farms, whether dairying, stock raising, or purely agricultural. The amount of the present expenditure has been pointed out. This in older Ontario has amounted annually to about a million and half days of statute labor, and $2,000,000 in cash appropriations; or a total estimated value of $3,500,000. It has been shown that this expenditure has not been applied to the best advantage.

Those having immediate charge of the expenditure are chosen annually by the township council to oversee the work. No fixed plans or specifications, or well defined instructions for building roads, have been agreed upon by the people. The result has been that each pathmaster is working out his own ideas, which may in turn be completely changed by his successors. There are so many in charge of the work, each responsible for his own division only, that no one is responsible for the work generally, the result being a confusion of ideas and no proper enforcement of the work as a whole. The effect has been one of patchwork and inefficiency.

A rapid revolution in these matters has not been attempted. The common highway is the chief public work in charge of the township councils. Slowly, however, by a process of education, the objects of the movement are being achieved, and without urging the expenditure of larger amounts upon the highways, methods are being changed. The townships are steadily, of their own accord, giving up statute labor, providing instead a complete money appropriation and placing the control of the roads in the hands of permanently appointed overseers. Seeing the good results achieved, a willingness is created to vote larger sums of money annually.

While Ontario is markedly an agricultural country, it possesses what is not always common in farming districts—a good supply of road-making material, distributed with a fair degree of uniformity. In some instances rock exposures occur, in places there are large beds of gravel underlying the surface mould, while other districts avail themselves of a considerable quantity of scattered boulders, which have to be removed from the fields.

Wherever consistent with fair wearing qualities, the material available in the locality is to be recommended. The importation of stone from a distance for use on country highways is not, as a rule, necessary, and the use of the local supply facilitates general improvement. In the case of gravel the chief points to be observed are that it is clean, free from excess of sand or earthy material, and that it is of fairly uniform size. These conditions can sometimes be secured by careful selection in the gravel pit, but in other cases screening is necessary to remove earthy material and large stones. In instances where large stones prevail, a stone crusher, with screen attachment is placed in the pit, and all material is passed through, thereby cleaning it and reducing it to suitable dimensions. Where field boulders are utilized, these, having been collected from the fields, are piled on the roadsides, where they are crushed by a portable stone crusher and left ready for use. In other instances, where there is not a local supply, crushed stone is brought in by train, the railway companies having shown a disposition to aid in the improvement of highways, especially where they converge to their own stations, by giving reduced freight rates, amounting in cases to the bare cost of handling the stone or gravel.

The latest development of the good roads movement in Ontario has been the appropriation of one million dollars by the Legislature to aid in the improvement of country roads. The motive for this step has, very largely, been to encourage county councils to assume the management of the most heavily travelled roads in each county, thereby forming them into one class, in the construction and maintenance of which the most efficient superintendence, plans, methods and machinery can be employed. One-third of the cost of constructing or reconstructing roads assumed under a county system will be paid by the Provincial Government, and the Act is so framed as to give county councils every opportunity to accept this aid. Should any counties fail in this, a proper proportion will be given to townships fulfilling certain prescribed conditions. Already county councils are everywhere interesting themselves in the matter.

HIGHWAY IMPROVEMENT LEGISLATION.

The Act passed by the Legislature in 1901, appropriating $1,000,000 to aid in the improvement of public highways has received throughout the Province the earnest attention of county and township councils. Conferences of county and township councils have been held in many cases, and wherever the question has been rightly understood there has been, practically, unanimity as to the benefits to be derived, and township councils are lending their assistance to the selection of the most important roads within their several townships, to be included in the system upon which improvements are to be made. Among the counties which have been most active in this regard may be included Lanark, Leeds and Grenville, Victoria, Dufferin, Wentworth, Welland, Peel, York, Wellington, Elgin, Halton and Simcoe.

The Act contains an alternative plan, giving county councils until January 1st, 1903, the privilege of taking advantage of the Act: failing in this, the township councils may then obtain their proportion of the Provincial appropriation.

Unfortunately, in a number of particulars, there has been some misapprehension as to the meaning and intention of the Act.

Roads to be Assumed.

Should a county council desire to take advantage of the Act, the first step would be to arrange with the various township councils as to what roads shall be assumed. These roads should be such as the council and township councils consider the most useful in serving the requirements of the people in each section. These roads may consist of one road in each township, or several roads; or part of one road, or parts of several roads, may be selected. As a general thing, they should consist of what are now the most heavily travelled roads in each township, leading to the market, town or village, of the district.

The roads should preferably connect, so as to form a continuous system—but it is not necessary that they should do so. In some counties the trend of travel is all in one direction, leading to one market centre. In other counties the trend of travel is cut up into a number of distinct sections, each township, it may be, having one or two market centres. Nor is the trend of travel marked by county or township boundaries, but divides according to local conditions, the most important factor in determining the line of travel, being, as a rule, the nearest or best market. These circumstances must be all taken into consideration in framing a county system of roads, and the aim should not be so much a connected system as a most useful system.

The object, it should be plainly seen, is not the improvement of old county roads many of which have become of but secondary importance, owing to the building of railways, and the growth of new local markets. Distinctly, the object is not the resurrection of old county systems, unless these roads can make good their claim to being still the roads of greatest travel.

In designating the roads unless there is some plain discrepancy, or a protest from some section of the people interested, the plan of the county council as to roads to be improved, whether a connected system or not, will be accepted by the Government. The reason for this is the belief that the county councils, with the advice of the township councils, will view the matter from a county standpoint, and that they are best able to frame the most serviceable system, the one upon which the expenditure will be the greatest benefit to the people.

Nature of Improvement Required.

The impression prevails, in some localities, that the Department of Public Works will require an expensive standard of road. On the other hand, a fixed standard will not be laid down. That will be left to the county engineer or commissioner having charge of the work, and his report as to the treatment of the road, and the character and cost of

the work undertaken will, for the most part, govern. That report, however, it will be necessary to submit to the Department, but so long as it embodies the elementary principles, proper drainage, crowning, and as far as possible uniform grading, and a systematic application of material, it will meet the requirements.

For example, in going over a road which falls within a county scheme, the first mile, owing to its having already been graded, gravelled, etc., to some extent, may only require patching and simple repairs to put it in good condition, at a cost of not more than $100; whereas the next mile, unimproved and neglected, through swampy land, might cost $500 to drain, grade and gravel or stone. And the next mile, being at the outer end of such road, on favorable soil, and receiving but little traffic, might be made equally good and serviceable by proper draining, grading and a light coat of gravel, at a cost of a couple of hundred dollars.

Number of Miles to be Assumed.

The number of miles to be assumed by a county council is not limited by the Act. The only requirement in this respect is that the mileage to be maintained by the county should be, as far as practicable, distributed among the various townships, in proportion to their area, in order that all the townships may be benefited.

It is not required that the expenditure shall be made in proportion to the area, nor in proportion to the road mileage.

Road improvemens may be placed wherever they will be most serviceable and effective in bettering the condition of the roads. It is quite possible to conceive of a case in which the greatest benefit to one township will arise in making almost the whole expenditure in an adjoining township. Take as an example a township where road material is plentiful and where liberal use of it has been made on the roads, bringing them all to a good and serviceable condition. If the people of this township, in order to reach their market town, have to pass through an adjoining township, in which road material is scarce, and where, through the character of the soil and difficulty of drainage, road-making is difficult and expensive, and the roads bad in consequence, it is apparent that the greatest benefit to the first township will arise from building and maintaining a good road through the second township, leading to the common market. Having in view such a conditon as this, of which instances are common throughout the Province, the reason for leaving the distribution of the expenditure to be governed by local circumstances will be apparent.

Amount of Expenditure.

The amount of money a council spends on the roads may be such as it sees fit to raise. This is not limited by the Act in any respect. The only restriction is with regard to the amount to be received as Government grant, this to be one-third of the cost of the work, up to, but not exceeding the county's proportion of $1,000,000.

This money, payable by the Government, may be drawn as the work progresses, and the rapidity with which it is drawn will depend upon the expenditure the county decides to make. It may be drawn in one year if a sufficient amount of work is done by the county. Or the work may be extended over several years, and the proper proportion of the money due under the Act will be paid from year to year as earned.

Inspection.

Special provision is not being made for Government inspection. The certificate of the county commissioner or engineer, as to the completion of the work will be accepted as to the manner of doing the work and expenditure of money. It is desired that the services of the Public Works Department in this respect will be advisory, rather than that of inspection. Any consultation or assistance of this nature rendered by the Department will be without expense to the municipalities.

Statute Labor.

The Act provides that the statute labor assessed against the lands fronting on the improved roads may be commuted by the township council in which the lands are situated, if the council so desires. The property adjacent to the improved roads will undoubtedly derive a direct benefit which should render it liable to such a measure. The commutation money will belong to the township, to be used as the council may direct. A natural step would be to use it in improving other roads in the township; while some townships propose using it in paying the rate levied against the township for county roads.

Good Maintenance Desired

The aim of the Act is not so much to oblige the building of an expensive system of complete roads, as it is to secure uniform and systematic work, employ and properly operate modern and economical implements, and provide careful, constant and methodical supervision in maintenance; to provide object lessons in the care and treatment of roads and set examples for those having charge of the remainder.

The Act, as it stands, has the alternative plan, whereby townships may individually carry on the work, but it is urged that the best results can be accomplished by a county council, because, as a council, they would have charge of these particular roads only, would have sufficient work for, and would naturally employ, a competent man to supervise and care for them.

Whereas, under township control, the township council, having charge of all the other roads in the township, as well as these special roads, will be influenced, after the first expenditure, to make future municipal expenditures on other roads, and those which have received Government aid will be neglected. While other roads in a township remained unimproved, many councils, after once improving a road under the Act, owing to local jealousies, would find it impossible to make a sufficient yearly expenditure to properly maintain it, and under such circumstances the first outlay would not accomplish its chief mission There are other reasons, familiar to most experienced councillors, why the principal roads, those subjected to extremely heavy travel, can be better and more economically maintaind by the one larger body in the county, rather than by the half dozen separate townships working independently of one another.

It cannot be doubted that the county councils, constituted as they are now, will take a deep and intelligent interest in this work, and will strive to create such a distinction between their roads, and those under township management as to stimulate a friendly rivalry which must naturally do much in the interest of improved highways and economical management.

The Towns Assist.

One chief object in recommending that certain roads be cared for by the county council is to obtain from the towns and villages in the county a fair share of assistance in keeping up the leading roads. There can be no question as to the justice of requiring the towns and villages to contribute towards the cost of this work. Towns and villages are benfited by the improvement of roads, and the county should not hesitate to assess them. This can be done through the county council only. It is not the intention that any of the money should be spent in the towns, but that all should be spent in the townships. Where the county has to raise two-thirds of the total amount, such a percentage of this will be contributed by the towns as to make their contribution, added to the Government grant, equal to about one-half the cost of the work. Where the townships, instead of the county, take advantage of the Act, towns and villages cannot contribute in this way. Under a county system, a portion of the cost of road-building is levied, in the county rate, against the towns and villages within the municipality for road purposes. At the present time, under township systems, the farmers bear the entire cost.

Further Benefits.

All the expenditure placed on roads would be spent in the county, and thus returned in a great measure, to those who contributed it in the first place, together with the Provincial grant.

Under county control a properly organized corps of men can be employed to build and repair the roads. As at other employments they become experienced and do better work, and in the matter of repairs are ready to make them as soon as signs of wear appear.

By a county plan uniformity of work and system will be secured throughout the various municipalities. Under township control a diversity of plans is certain to be adopted.

In a county plan an experienced and properly qualified man could be employed to have constant supervision of the work, whereas under township control each municipality cannot afford to pay the salary of such a man. Under every good system it is necessary to have responsibility centralized and defined, not divided and easily shifted from one to another, as it now is under the statute labor system.

Under county control, modern machinery, too expensive for individual townships, can be purchased and handled to advantage, an experienced operator can be employed for each implement, and a better and more uniform class of work will be secured.

A township can manage its roads properly only by adopting a plan similar to that outlined under a county system, but by extending it over a county it becomes more cheaply operated.

It is urged that, while there may be some feeling adverse to townships parting with the control of any of their roads, it is nevertheless impossible, under a township organization, in the case of heavily travelled roads, to levy the necessary taxation equitably, or employ the most economical and at the same time serviceable system. The trend of opinion has turned towards collecting the most important roads of each county, placing them under the management of the county council. It has been shown that by such a means road-making can be placed on a more business-like basis, and consequently greater efficiency is secured. It provides for a more equitable system of levying the cost, for a better use of modern machinery, and for a higher grade of oversight and workmanship. At the present time township councils are unable to maintain the roads by statute labor, and are in consequence compelled to make annual appropriations of money from the general tax. This money is, in the main, spent on the roads which would comprise a county system, but owing to the contracted character of the township system township councils cannot expect to apply this expenditure to the greatest advantage.

A greater cost to the individual citizen need not be feared, as no greater road mileage is to be maintained. The effect of a county system is merely to group the most heavily travelled roads under one management, where they can be most economically maintained.

PROCEDURE.

Under the Highway Improvement Act the preliminary step taken by county councils has been to hold a conference of all municipal councillors, or representatives of councils within the county. At these conferences, the majority of which have been attended by the Commissioner of Highways, the meaning and intention of the Act has been discussed, and to some extent a plan of roads considered.

It then rests with the county council to pass a by-law definitely laying down a system of county roads. A copy of this is sent to each township council within the county, and they have three months in which to consider the by-law. Each council will, within the three months, report to the county council their acceptance of the plan, their rejection of it as a whole, or such alterations in the system of roads as would meet their

approval. If a township wishes roads taken other than those proposed by the county, in case of failure to agree, the matter will be submitted to arbitration. If more than a third of the municipalities oppose the by-law as a whole, the question must be submitted to a vote of the people. If the by-law meets the acceptance of the municipal councils, or two-thirds of them, the county council may, at the end of three months, proceed to perfect their plans for the improvement of the roads.

The By-Law.

The first by-law required in assuming the roads is of very simple form, that of the County of Simcoe, being :

BY-LAW NO. 702.

A by-law to designate the highways to be improved in the County of Simcoe.

Whereas, it is deemed necessary and expedient to designate by by-law the highways to be improved within the County of Simcoe, pursuant to the provisions of an Act entitled "An Act for the Improvement of Public Highways," I. Edward VII., Chap. 32.

Therefore, the Municipal Council of the Corporation of the County of Simcoe enacts as follows :

1. That the several roads and highways mentioned and set forth in the schedule to this By-law annexed, and shown in red on the map of the County of Simcoe to the said schedule attached, be, and the same are hereby designated as the roads or highways to be improved in the County of Simcoe under and in accordance with the provisions of the above mentioned Act for the Improvement of Public Highways.

Passed at Council Chamber, Barrie, this seventh day of February, 1902.

SCHEDULE REFERRED TO IN BY-LAW NO. 702 OF THE COUNTY OF SIMCOE, ENTITLED, "A BY-LAW TO DESIGNATE THE HIGHWAYS TO BE IMPROVED IN THE COUNTY OF SIMCOE."

Road No. 1.—Burton Avenue, from the Essa Road easterly to the eastern limit of the Town of Barrie ; Penetang road, from said eastern limit of the Town of Barrie, through the Townships of Innisfil and West Gwillimbury and the Village of Bradford, to the road known as the Bond Head road, or the concession line between the 6th and 7th concessions of the Township of West Gwillimbury ; the said concession line from the said Penetang road westerly to the Village of Bond Head, and the town line between the Townships of West Gwillimbury and Tecumseth ; the said town line between the last named townships from the said concession line northerly to the concession line between the 7th and 8th concessions of the said Township of Tecumseth ; the said concessions line between the 7th and 8th concessions of Tecumseth ; and the town line between the Townships of Adjala and Tecumseth southerly from the concession line between the 7th and 8th concessions of the Township of Tecumseth to the sideroad between lots 15 and 16 of the Township of Adjala ; the said sideroad between lots number 15 and 16 in the several concessions of the said Township of Adjala.

Road No. 2.—Commencing on the railway crossing on the road known as the Essa road, in the Town of Barrie, thence the said Essa road to the town line between Essa and Innisfil ; the said town line thence south to the Village of Cookstown ; the town line between the Townships of Essa and Tecumseth and between the Township of Tossorontio and Adjala to the Village of Rosemont; the town line between the Townships of Tossorontio and Essa from the south town line of said townships north to the side road between lots number 10 and 11 of the Township of Tossorontio; the said side road between said lots 10 and 11 in the several concessions of the Township of Tossorontio; the side road between lots numbers 25 and 26 across the 1st, 2nd and 3rd concessions of the Township of Tossorontio.

Road No. 3.—Commencing at the terminus of Elizabeth street, at the western boundary of the Town of Barrie, the give road known as the continuation of Elizabeth street, to the concession line between the 6th and 7th concessions of the Township of

Vespra ; the said concession line south from the said given road to the town line between Innisfil and Vespra ; the town line westerly from the said 7th concession line between the Townships of Vespra and Innisfil and Vespra and Essa to the western boundary of the Township of Vespra ; the town line between Essa and Sunnidale from the said western boundary of Vespra to the west side of the Nottawasaga River ; thence the given road to the Village of Angus ; the established road from the Village of Angus, near the centre of the 3rd concession, to the concession line between the 3rd and 4th concessions of Essa; the concession line between the said 3rd and 4th concessions from the said established road south to the town line between the townships of Essa and Tecumseth ; the sideroad between lots numbers 5 and 6, in concessions 4 to 14, inclusive, and the broken front of the Township of Tecumseth; the concession line between the 4th and 5th concessions of Tecumseth, from the sideroad between lots 5 and 6, westerly to the town line between Adjala and Tecumseth ; the town line between Adjala and Tecumseth northerly from the said last mentioned concession line to the sideroad between lots 10 and 11, in the 6th and 7th concessions of the said Township of Adjala; the concession line between the 5th and 6th concessions of the Township of Adjala, from sideroad between lots 10 and 11 northerly to the sideroad between lots 15 and 16 in the said concession.

Road No. 4.—Commencing on the town line between the Townships of Sunnidale and Essa, at the deviation road leading to the Village of Angus ; the said town line from the said point westerly to the road known as the Sunnidale road ; the said line between the 12th and 13th concessions ; the said line between the 12th and 13th concessions easterly from the said Sunnidale road to the town line between the Townships of Nottawasaga and Sunnidale ; the said town line between the Townships of Sunnidale and Nottawasaga ; from the sideroad between lots 24 and 25 to the sideroad between lots 33 and 34 of Nottawasaga, and the road known as the Lake Shore Road to Pretty River Bridge, in the Town of Collingwood, from the town line between Sunnidale and Nottawasaga.

Road No. 5.—Commencing at the Sunnidale road, between lots 21 and 22, the established road leading westerly, known as the New Lowell and Creemore road, to the town line between Sunnidale and Nottawasaga ; the town line northerly between said townships to the sideroad between lots 9 and 10 in the Townships of Nottawasaga, the said sideroad between lots 9 and 10 from the said town line to the deviation or established river road leading to the Village of Dunedin ; the said deviation, established or river road to the said Village of Dunedin ; Hurontario street, from the said Village of Dunedin to Sixth street, in the Town of Collingwood, and the sideroad between lots 33 and 34, from Hurontario street to the western boundary of the Township of Nottawasaga ; the sideroad between lots 24 and 25, in the Township of Nottawasaga, from Hurontario street easterly to the Town of Stayner, and from the easterly boundary of the Town of Stayner to the eastern boundary of the said Township.

Road No. 6.—The road known as the Mill road or the concession line between the 4th and 5th concessions of the Township of Vespra and the deviation thereof from the Town of Barrie to the northerly town line of the said township ; the town line between Townships of Flos and Vespra, from said last mentioned road westerly to the sideroad between lots 5 and 6 in the 1st concession of the Township of Flos ; the sideroad between lots 5 and 6 in the several concessions of the said Township of Flos ; and sideroad between lots 13 and 14 in concessions from 1 to 10, both inclusive, in the Township of Tiny ; concession line between the 10th and 11th concessions of the said Township of Tiy, from the said sideroad easterly to the deviation road leading to the Town of Penetanguishene ; the said deviation road from said last mentioned point to the said Town of Penetanguishene ; the established road from the Town of Pentanguishene to the concession line between the 15th and 16th concessions of the Township of Tiny, and the said concession line westerly to the Village of Lafontaine, known as the Penetanguishene and Lafontaine road, and the road known as the Minesing road from the concession line between the 4th and 5th concessions of the Township of Flos from the Village of Fergusonvale westerly to the town line of the said township, and the concessions line between

the 12th and 13th concessions of the Township of Sunnidale from the western boundary of the Township of Flos to the Sunnidale road ; the concessions line between the 8th and 9th concessions of the Township of Flos from the sideroad between lots 5 and 6 westerly through the Village of Elmvale to the western boundary of the township.
Smith, Winona.

Road No. 7.—Ross street, in the Town of Barrie, easterly to Davis street; Davis street from Ross street northerly to Steel street ; Steel street easterly from Davis street to the Penetanguishene road ; the said Penetangnishene road northerly to lot 51 ; the deviation of the said Penetanguishene road from lots 51 to lot 59; the said Penetanguishene road to lot 60 ; the deviation of said road from lots 60 to lot 69, and the said Penetanguishene road from lot 69 to the town line between the Townships of Tay and Medonte ; the town line between the Townships of Tay and Medonte easterly to the concession line between the 10th and 11th concessions of the Township of Medonte ; the deviation road from said last mentioned point to the Coldwater road, in the Village of Coldwater ; thence Coldwater road northerly to the town line between Tay and Medonte; the town line between Tay and Medonte easterly from the said last mentioned road to the town line between the Townships of Matchedash and Tay ; the said last mentioned town line northerly to the sideroad between lots 6 and 7 ; the said sideroad between lots 6 and 7, in the 1st and 2nd concessions in the Township of Matchedash.

Road No. 8.—The sideroad between lots letter "E" and number 11 and in the 1st concession and between lots "A" and 11 in the 2nd concession, and between lots 20 and 21 in the 3rd to the 11th concessions, both inclusive, all in the Township of Oro ; the concession line between the 11th and 12th concessions of the said Township of Oro, from the sideroad between lots 20 and 21, northerly to the sideroad between lots 15 and 16 ; the sideroad between lots 15 and 16, in the 12th, 13th and 14th concessions of the Township of Oro ; the sideroad between lots 15 and 16 in the 1st concession of the Township of South Orillia, easterly from the town line to the deviation or established road, across lots 14 and 15, in the said 1st concession ; the said deviation road across lots 14 and 15 to the concession line between the 1st and 2nd concessions of the said Township of South Orillia ; the said concession line between the said 1st and 2nd concessions northerly from the said deviation road to the deviation road leading easterly from the said concession line established across lots number 11 and 12, in the 2nd and 3rd concessions of the said township ; the said deviation or established road across lots 11 and 12, in the 2nd and 3rd concessions, to the concession line between concessions 2 and 4 of the said township; the aid concession line between concessions 3 and 4 from the last named deviation road northerly to the sideroad between lots number 9 and 10, in the 4th concessions of the said township ; the said sideroad easterly from the last mentioned concession line to the deviation road leading to the Town of Orillia ; the said deviation road from the said sideroad to Andrew street, in the Town of Orillia.

Road No. 9.—The road known as the Coldwater road, from West street, in the Town of Orillia, westerly and northerly through the Townships of Orillia and Medonte, to the Village of Coldwater ; the established road from the town line between the Townships of Tay and Medonte northerly to the Village of Fesserton, and thence from the Village of Fesserton, through the Villages of Waubaushene, Sturgeon Bay, Victoria Harbor, Old Fort, and thence to the Town of Midland ; the Muskoka road, from Nerwash street, in the Town of Orillia, through the Township of Orillia, to the Severn Bridge.

Road No. 10.—The sideroad between lots 25 and 26 in the 1st and 2nd concessions, and between lots 10 and 11, in the 3rd to the 14th concessions, both inclusive, of the Township of Oro ; the town line between the Townships of Oro and South Orillia northerly from said sideroad between lots 25 and 26 to the road between lots 9 and 10, in the 1st concession of the Township of South Orillia ; the said road between lots 9 and 10 in the 1st, 2nd and 3rd concessions of the Township of South Orillia.

Resolution and Notice.

The following is a copy of a resolution and notice accompanying the foregoing By-law, as transmitted to each Municipal Council :

Moved by Mr. Bruce, seconded by Mr. Jupp ;

Ordered : That the County Clerk be instructed to send by registered parcel post, together with the copy of the By-law to designate Highways, required to be transmitted to the clerks of the townships of the county under the Act for the Improvement of Public Highways, a map or plan of the county, showing the designated highways, which he is hereby authorized to procure and prepare, and a notice in the words or to the effect following :

Dear Sir,—I enclose you herewith a copy of By-law No. 702 of the County of Simcoe, for the consideration of the Municipal Council of your township.

The said Municipal Council is requested to report to me within three months of the receipt of this notice their answer, "Yes" or "No," to each of the following questions :

I. Are you in favor of a County Road System ?

II. Do you approve of the roads within your township, designated by the County Council in the Schedule to By-Law No. 702 ?

If either of the above questions is unanswerd within the said time, it will be presumed that the Municipal Council is in favor of an affirmative answer to such question.

Yours truly,

R. T. BANTING,

County Clerk, County of Simcoe.

To.....

Clerk of the Municipality.

ACT FOR THE IMPROVEMENT OF PUBLIC HIGHWAYS.

The complete Act for the Improvement of Public Highways, which received the assent of the Legislature, April 15th, 1901, is as follows :

His Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows :

$1,000,000 appropriated for road improvements.

1. The sum of $1,000,000 is hereby set apart to be paid out of the Consolidated Revenue Fund of the Province to aid in the improvement of public highways, subject to the terms and conditions hereinafter set forth.

Townships to report acceptance or rejection of by-law.

2. (1) The highways to be improved in any county may, before the 1st day of January, 1904, be designated by by-law of the county council, and a copy of such by-law shall be transmitted forthwith to the clerks of the townships of such county.

By-law designating highways to be improved.

(2) The municipal councils of the townships shall within three months of the receipt of such notice from the clerk of the county council, take into consideration the highways so designated in said by-law and shall report their acceptance or rejection of the same to the clerk of the county council.

Arbitration where one-third of the township are adverse.

(3) On the receipt of such reports by the clerk of the county council from the clerks of the township councils in the county, if it should appear that one-third of the township councils are adverse to the highways designated by the county council as county highways, then the roads within such townships as reported adversely which are to form part of the county highway system of such township shall be determined by arbitration as provided in the Municipal Act.

Rev. Stat. c. 223.

Submitting question to ratepayers.

(4) Where it appears that more than one-third of the township councils disapprove of the system of highways designated in the by-law submitted by the county council, the county council shall then submit to the ratepayers of the county qualified to vote on money by-laws the question, "Are you in favor of a county road system?" If a majority of the votes cast is in favor of a county road system, the roads to be designated and assumed within any township, the council of which disapproved of the roads designated by the county council, shall be determined by arbitration as provided in the Municipal Act.

Submitting by-law for improving roads

3. Before the final passing of a by-law by a county council designating and assuming roads as provided in sub-sections (1), (2) and (3) of the preceding section, the county council may submit the same for the approval of a majority of the ratepayers of the county qualified to vote on money by-laws.

When local municipalities may adopt road scheme.

4. In case the by-law or question so submitted fails to receive the assent of a majority of the ratepayers of the whole county so voting or the county council neglects to take action as provided in section 2, then the council of any local municipality in the county may, on or before the first of January, 1904, pass a by-law designating the roads within such local municipality to be improved, but no by-law for the improvement of roads in any municipality shall take effect until such by-law is approved by a majority of the ratepayers of such municipality in the manner provided by the Municipal Act with respect to by-laws for the creation of debts.

Application of grant to purchase of toll roads.

5. Any municipality may apply the whole or part of the moneys to which it may be entitled under this Act towards paying any expenses that may be incurred for the purchase of toll roads within such municipality, or for freeing the same from tolls. Such toll roads as are purchased shall be included in the roads to be designated and assumed or improved in accordance with the provisions of this Act.

Regulation and inspection.

6. Any highway, in order to come under the provisions of this Act as to aid, shall be constructed or repaired according to the regulations of the Public Works Department with respect to highways.

Mileage assumed to be proportioned to assessed area.

7. The road mileage to be designated and assumed in accordance with this Act shall, as nearly as practicable, be in proportion to the assessed area of each township and county, provided always that no township or county shall receive out of the said sum of $1,000,000 more than the sum to which it is entitled under this Act.

Grant of one-third of cost of improvement.

8. On the completion of any work or road improvement under this Act the council of the municipality under which such work was carried on shall submit to the Public Works Department a statement setting forth the cost of such work, such statement to be certified by a competent engineer, who shall further certify that the regulations of the Public Works Department have been complied with, and on the receipt of said statement by the Provincial Treasurer, certified and approved by the proper officer of the Public Works Department, the municipality shall be entitled to receive out of the moneys hereby set apart for public highways an amount equal to one-third of the cost of the work, but not to exceed the proportion of the appropriation to which such municipality is entitled.

Issuing debentures for expenditure on highways.

9. The municipal council of any township or county taking advantage of this Act may raise by debentures, payable in thirty years, as provided by the Municipal Act, such sums of money as may be necessary to meet any expenditure on highways under this Act, but in no case shall the debentures issued under this Act exceed two per cent. of the equalized assessment of the county.

Statute labor on improved roads to be commuted.

10. The statute labor, for which all lands fronting on roads constructed or repaired under this Act may from year to year be liable, may be commuted and may be applied towards the improvement of the other highways of the municipality as may be determined by the township councils concerned.

Amount of colonization road grant to be deducted.

11. In the case of any township receiving grants from the consolidated revenues of the Province for colonization roads, the amount of such colonization grants shall be deducted from any sum of money to which such township is entitled under this Act.

Grants made before passing of Act to be deducted.

12. Where any township has been in receipt of grants for colonization roads out of the consolidated revenue fund, for the five years previous to the date of this Act, the assessed area of such township shall be deducted from the area of the county in which such township is situated, in determining the sum to which the county is entitled under this Act.

REGULATIONS WITH RESPECT TO HIGHWAYS.

The regulations referred to in section 6 of the foregoing Act will be the following:

All road improvement under the provisions of 1 Edward VII., chapter 32, is to be done by a capable commissioner appointed by the Council.

A plan of the roads to be improved, a report as to their present condition, and approximate amount of travel over them, specifications showing what work of improvement is to be made, together with an estimate of the cost, shall be prepared by the said

commissioner, these to be presented to the Department of Public Works for approval. The improvements must be of a character suited to the requirements of the locality and may consist of: (a) Re-surfacing and substantial repairs on old gravel or stone roads; (b) draining and grading the roads; (c) draining, grading and gravelling the roads; (d) draining, grading and metalling the roads with broken stone. These plans and specifications shall, as far as practicable, provide as follows:

1. The steepness of hills should not exceed a rise of one foot in twelve.

2. The roadway graded for traffic should be in the centre of the road allowance and should have a uniform width of 24 feet between the inside edges of the open ditches. The width of roadway on cuts and fills should not be less than eighteen feet.

3. Side slopes in cuts and fills should be one and one-half feet horizontal to one foot vertical.

4. The crown given the newly finished roadway should be uniform and have a rise of one inch to the foot from the edge of the ditch to the centre of the road.

5. When gravel or broken stone is used it should be placed to a width and depth sufficient to form a serviceable road, having due regard to the character and extent of the traffic.

6. The gravel or broken stone used on the road should preferably be obtained in the vicinity of the road, but must be of good quality.

7. As a rule the gravel or stone should not be of a less width than eight feet, nor of a less depth in the centre than nine inches.

8. Where roads have heretofore had gravel or broken stone placed on them, they should be repaired by cutting off shoulders, shaping with a grader, and adding a sufficient amount of gravel, or broken stone, to fill ruts, depressions, properly crown and make a road sufficiently strong to accommodate the travel.

9. The gravel or broken stone placed on any road should be thoroughly rolled; otherwise the grade should be maintained by careful raking or scraping until compacted by traffic.

10. An open drain should be made at each side of the road, and given a sufficient fall to a free outlet.

11. Durable sluices and culverts should be built where necessary.

12. Tile underdrains should be laid, so as to carry away excessive sub-soil water, lower the water-line, and secure a dry roadbed, wherever a moist, damp, or springy condition of the sub-soil exists.

13. Modern machinery and implements should be used as far as possible to secure the greatest results from the expenditure, and to provide the best work.

14. Where, owing to special local conditions, any departure from the foregoing regulations may be desired, upon application of the council, an examination of the road or roads in question will be made, free of charge, by an engineer of the Public Works Department, for the purpose of deciding upon a suitable plan.

THE TOWNSHIP SYSTEM.

That statute labor has done much to improve the country roads cannot be questioned. In the pioneer days of the Province, farms were far apart and there were few settlers to make or use roads. The consequence was that every man knew that the work of cutting out roads had to be done, and all turned out willingly, each one to do his share. They needed the roads to go to market but a few times in the year. The church, school and public meetings were, to many, unheard of luxuries, yet, if necessary, they were prepared to spend a couple of weeks where only a couple of days were required by statute. We are very differently situated. All have now good farms, the one adjoining the other, and the land is cleared and large crops are grown, so that it is necessary for the farmer to go to market, the postoffice or the village store almost every day. Big loads have to be hauled over the roads, and it is of great moment that we should be able to do so easily and without interruption. To do all this, it is absolutely

necessary that the roads should be vastly better than they were forty, thirty, or even twenty, years ago. Unfortunately, there are many roads throughout the townships unsafe for travel, and for weeks at a time, in some districts, the farmers cannot go to town after dark with even a moderate load.

Has Done Good Work.

There are, no doubt, sections, and even townships, in which the residents will be inclined to argue that statute labor has constructed their roads in a fairly substantial manner, and is keeping them in good condition. The roads in some divisions are as good as anyone would need, and all kept up by statute labor. The men turn out and do a good day's work, and it is difficult, perhaps, for them to see why any exception could be taken to the present system. The difficulty arises from the fact that, while one section is good, and statute labor is efficiently performed, there are other sections in the township where the work is half done, and where the roads in the wet season are in an almost impassable, and even dangerous, condition. It sounds very well to say that one section cannot help what another section is, that if the residents of one division do not take enough interest in their roads and farms to properly perform their statute labor they should be allowed to have bad roads. That would be all very well if the indifferent people were the only sufferers ; but, on the other hand, those who keep up their roads suffer almost as much as those who do not. It is almost useless for one section to keep up its roads where, no matter in what direction from it one drives, he is certain at the end of it, to drop off into bog holes and impassable mires.

Paid to Neglect Roadwork.

From the fact that townships are each year making large money appropriations for repairing roads arises the evil that a premium is placed on neglecting to perform statute labor. Those who fail in their duty in this respect very often do so from the fact that, by appealing to the council, they can be paid for repairing their roads, and doing the work which they should have done by their own statute labor. The money with which the council pays for this work is collected from the entire township, and it follows that those who do their road work faithfully must also pay for the work done in this way by men who will not perform their statute labor.

Benefits of Commutation.

The natural query arises as to how benefits will arise from a system of commutation whereby every taxpayer will have to pay a rate for every day of statute labor for which he is liable. There are many ways whereby waste will be overcome. The time spent by a hundred or so pathmasters attending the clerk's office to qualify for office, the time spent in warning hands out to work will be saved. The time of pathmasters as bosses will be saved. A great many people come to work too late, and stop too early, and that time will be saved. Then there is the waste which comes from doing road work as an annual holiday, the carelessness in properly planning the roadwork, the hauling of sand and loam instead of gravel, working at wrong seasons of the year, too few teams or too few shovelers. In all these, and in many other respects, there will be removed waste whereby, at the present time, the number of days on the statute labor roll really represents scarcely one-third that amount of dollars.

The Proper System.

Under a proper system of communtation a township is divided into a suitable number of sections, one, two, three or four, as circumstances may dictate. The council appoints a supervisor, or commissioner in charge of each section, and under this supervisor, who is held responsible for all outlay on roads, work has to be performed as systematically and as economically as if each were working on his own farm.

It is sometimes objected to the commutation system that it is almost too just and compels the poor man to pay in money what he can much more easily pay in labor. Any by-law adopted should provide that the commissioner, in employing men and letting contracts, should divide the work as much as possible among those residents of the township who desire employment upon the roads, and who are in a position to do the work satisfactorily, giving preference to those living in the vicinity of the work to be done. In this way the poor man has every opportunity to work on the roads and can, in all probability, earn more in working on the roads than he has paid out as his share of the road tax.

Work Must be Well Done.

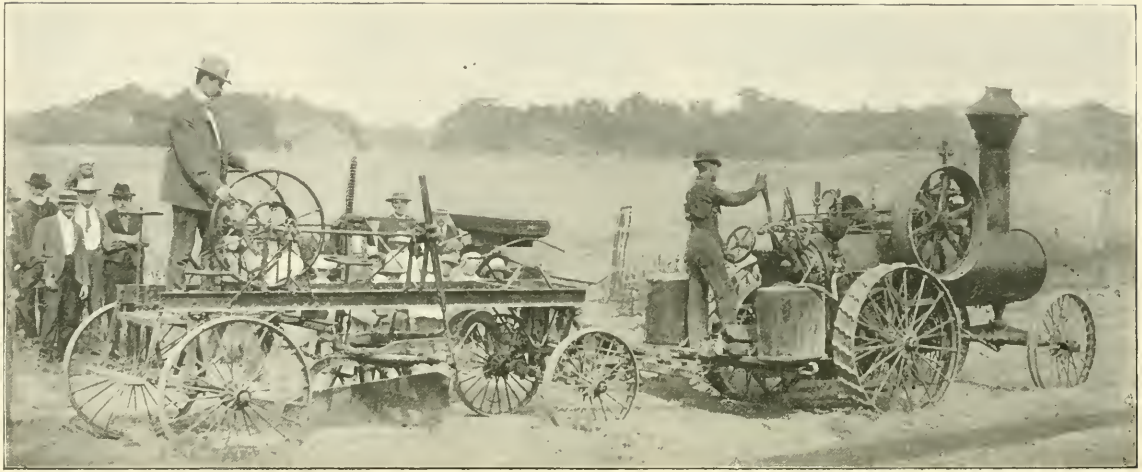
A question further arises that if these men are allowed to work on the roads what better off will the township be under commutation as opposed to statute labor? The answer is that the township will be a great deal better off, because the men will have to do a full day's work of ten hours a day. Instead of enjoying a holiday they will be under a foreman, who will see that they go to work suitably prepared. Instead of sending a boy, as many now do, or instead of going with a waggon not fit to draw half a load, a man will have to go with a waggon that will carry a yard or more of gravel at a trip. Instead of loafing in their time and getting off early to milk the cows or do the chores, as is so often the excuse, they will have to do a full day's work, and it will be the duty of the foreman or overseer to see that a sufficient number of teams are provided and a sufficient number of shovellers, and at the same time to do a full day's work himself.

Improvement is Fairly Distributed.

It is feared by some, especially those living in the outlying districts, and off the main roads, that the roads in their section will be neglected, and that in attempting to do permanent work and extending it from year to year, as should be aimed at under a proper system, it will be a long time before their farms are reached. That is one of the most mistaken views of the proposed reform that could possibly arise. That is, as a rule, what the case is at the present time, and it will be overcome if a proper system is adopted. A proper by-law will provide that all the taxes from each division will be spent in the division where they are collected, and in that way the money cannot be taken away from one section and spent elsewhere. At the present time one section may keep its roads in good condition by means of statute labor, but, as previously pointed out, there are other sections where the men loaf in their time, and then in the spring and fall, when the roads are bad, go to their township council and get grants of five, ten, twenty and fifty dollars to help them do the work they should have performed at the time of statute labor. Scores of these grants are made by the councils every year, and the sections which do their road work as it ought to be done have to pay their share of them, although they may never ask for or get such grants for their own roads.

Experienced Roadmakers.

The means whereby a proper system of road management will tend to improvement are very many. Townships which have from fifty to one hundred pathmasters find that each makes the roads as he sees fit. No two pathmasters will exactly agree as to how the roads should be constructed, graded or crowned and the result is a patchwork system in all these respects. Few townships have an up-to-date, continuous, macadamized road throughout their entire area. Under one road commissioner for each township or for each division of a township, uniform systems could be followed from year to year. The commissioners themselves becoming, through experience, experts in their work, machinery could be used by them to better advantage; and in ways almost without number, a decided gain would be effected by reforming the system of road management to an extent, and with a spirit in keeping with modern progress.



A Grader Operated by a Traction Engine.

THE TOWNSHIP SYSTEM OUTLINED.

The chief points in the systems of road management in townships where improved methods have been adopted include the following:

Statute labor is commuted at a fixed rate per day, and the amount is collected at the same time as the other taxes, by the township tax collector.

The township, if desired, is divided into a convenient number of road divisions for road purposes, usually two, three or four, and a road commissioner is appointed over each.

The duties of the road commissioner are:

(a) To supervise all work and repairs done on the roads and bridges within his division.

(b) To acquaint himself with the best methods of constructing and maintaining good roads, and of operating graders and other road machinery, used by the township.

(c) To employ, direct and discharge all men and teams required to carry on the work, and to purchase necessary materials.

(d) To see that all washouts, drain and culvert obstructions, bridge failures and other unforeseen defects are repaired or protected, with the least possible delay, so as to prevent further injury to the road, or accident to the users of the road, and to otherwise act promptly in all cases of emergency.

(e) To report to the council early in each year as to the work required the coming season, and to carry out the instructions of the council with regard thereto, and to perform such other services as may be required of him from time to time, under the written instructions of the council.

(f) To collect the poll tax in his road division.

(g) To keep an accurate record of the men employed and the work done, and to furnish this written form to the Reeve at proper intervals in order that the Reeve, upon being satisfied of the correctness of the statement, may issue cheques for payment thereof.

(h) To stake out all works and see that they are undertaken systematically, so that no time will be lost in taking men, teams and machinery from one part of the township to another.

The usual road appropriation is made from the general funds of the township, this to be used for the purchase of tools, machinery and materials, or for small jobs and contracts.

The residents of the township are employed to do the work, provided they come properly equipped, and will do a fair amount of work.

Work is paid for in cash, if desired, but preferably by cheque; payment to be made in accordance with the pay roll submitted by the road commissioner or overseer, accompanied by necessary vouchers and such information as may be considered necessary.

A general plan for road improvement should be laid down by the council for the commissioner to follow.

This plan should specify the width to be graded, width and depth of road metal, character of drainage, etc., of all roads.

Roads of importance should not be less than twenty-four feet between the inside edges of the open ditches. No roads should be of less width than eighteen feet.

All roadmaking machines should be under the care of the road commissioner.

The same man and teams should be hired to operate the machinery for the entire season, as they become proficient and do better work. This applies particularly to the operation of a road grader.

The council appoints foremen in different parts of the township to collect the necessary labor, and act promptly when roads are blocked with snow, the men employed to be paid in cash by the council.

STATUTE LABOR COMMUTED AND ABOLISHED,

The number of townships turning from the ordinary method of performing statute labor, to systems of commutation, or even the entire abolition of statute labor, is steadily increasing. Returns from clerks of other townships show a gratifying progress, in that the great majority state that a change in the method of township road management is being seriously discussed. The indications are that within a very few years the townships will of their own accord adopt approved methods of supervision, in place of the existing statute labor system. The strong feeling in favor of statute labor which existed at the commencement of the good roads movement has been almost completely overcome. The system proposed in its place is no longer an experiment, but a plan which experience has proven to be one of economy and efficiency.

The following schedule showing the townships in which statute labor is abolished or commuted presents strong evidence of the growth of road reform. It will be observed that in a number of cases commutation is partial, and in some instances the original number of pathmasters have been retained. The unnecessary number of pathmasters is one of the serious defects of the statute labor system, and where they are not reduced to a suitable number of overseers, one, two or even four overseers for a township, the new system cannot be said to have had a fair trial. This schedule does not include the numerous townships in which are unincorporated villages commuting statute labor.

Township.	System.	Year change was made.	No. of road divisions.	No. of road commissioners or overseers.	Special road or commutation rate.	Remarks.
Fullarton	Statute labor abolished	1901	5	.....	½ mill on $1 assessment	Councillors act as commissioners.
Stafford	" "	1901	2	1	.....	Rate equals 45c per day of statute labor.
North Plantagnet	" "	1901-2	4	4	50c per $100 assessment	
Malden	" "	1892	4	.....	.....	Councillors oversee all work.
Drummond	" "	1902	45	45	1 5-10 mills on $1 assessment	
Winchester	" "	.....	4	4	.....	
Blanshard	" "	.....	.....	.....	.....	
Cumberland	Statute labor wholly commuted	1902	2	2	50c per day	
Westminster	" " "	1902	4	4	45c "	Each commissioner paid $25 yearly.
Gloucester	" " "	1891	5	5	50c "	
S. Norwich	" " "	1901	55	55	50c "	
Monck	" " "	1901	5	5	75c "	
Binbrook	" " "	1896	26	26	50c "	
Bertie	" " "	1901	4	2	75c "	
Pelham	" " "	1900	2	2	50c "	
Pickering	" " "	1900	21	21	60c "	
Orillia	" " "	1900	4	4	50c "	
Barton	" " "	1892	8	8	25c "	
North Monaghan	" " "	1895-6	4	4	75c "	
York	" " "	1900	.....	.....	$1.00 "	Township divided into four districts and each district into four divisions. All work under township engineer who appoints foremen in each division.
Sidney	" " "	1900	5	1	50c "	
Goulbourn	" " "	1901	4	1	60c "	
Bromley	" " "	1901	5	5	75c "	
Darling	" " "	.....	24	24	$1.00 "	
Ratter and Duonett	" " "	.....	10	.....	$1.00 "	
Ernesttown	" " "	.....	69	69	75c "	
Pelee Island	" " "	1898	13	4	50c "	Divisions placed in four groups, A. B, C, D, with a commissioner for each group.

Saltfleet	" " "	1893	3	3	35c "		
West Hawkesbury	" " "	1902			60c "		
Ekfrid	" " "	1902			75c "		
St. Joseph	" " "	1902	3	3	75c "		
Guelph	" " "	1902					
McIrvine	" " "	1896	2	2	$1.00 "		
South Dumfries	" " "	1901	5	5	75c "		
North Grimsby	" " "	1892	2	2	50c "		
Macaulay	" " "	1901	6	6	$1.00 "		
North Dorchester	" " "	1900	22		50c "		Councillors act as commissioners
West Nissouri	Statute labor wholly commuted	1901	82	4	50c per day		
Whitby	" " "	1900	12	12	60c "		Commissioners act under a member of council.
Rear, Leeds and Lansdowne	" " "	1901	5	5	75c "		
Tecumseth	" " "	1900	6	6	50c "		
Caledon	" " "	1901	2	2	65c "		
Plummer Add'l	" " "	1901	1	1	$1.00 "		
Carlow	" " "	1901	5	5	60c "		
Westmeath	" " "	1902	2	2	75c "		
Ancaster	" " "	1898	24	24	50c "		
East Zorra	" " "	1898-1902	1	1	50c "		
South Grimsby	" " "	1901	3	3	65c "		
Alnwick	" " "	1902	2	2	50c "		
Downie	" " "	1901	5	5	60c "		A councillor acts with each commissioner.
Toronto Gore	" " "	1899	2		65c "		Councillors and reeve act as commissioners for entire district.
Clinton	" " "	1895	4	4	50c "		
West Oxford	" " "	1902	2		50c "		By-law provides for one or more commissioners.
Nelson	" " "	1900	2	2	50c "		
Thorah	" " "	1902	2	2	50c "		
Otonabee	13 road divisions commute	1900-1			50c "		
East Oxford	One half statute labor commuted	1900			60c "		
Middleville	Area of four square miles commuted	1901			75c "		
Blenheim	Three road divisions commute	1899-1901			50c "		
Bastard	Four road divisions commute	1898			50c "		
Burford	11 road divisions commute	1898			50c "		
Stamford	26 road divisions commute	1896	2	2	50c "		Commissioners superintend commuted districts only.
Sarawak	2 wards commute	1896	2	2	60c "		Four wards in township.
Osgoode	3 "	1902	3	3	60c "		Five " "
Tilbury North	One-fifth township commutes	1898			50c "		
Kingston	23 road divisions commute				35c to 50c per day		75 divisions in township.
Sarnia	1 " "	1891			$1.00 per day		
Etobicoke	18 " "				$1.00 "		
Louth	One-half statute labor commuted	1895	23	23	40c to 50c per day		
North Crosby	2 road divisions commute	1898-1900			60c per day		
Niagara	One-half statute labor commuted	1901	55	55	50c "		
North Norwich	44 road divisions commute	since 1894	48	48	50c "		
East Whitby	Two-fifths statute labor commuted	1900			50c "		

RESULTS OF THE NEW SYSTEM.

Township clerks, commenting on the results of the abolition and commutation of statute labor in townships where approved methods have been adopted, say:

MALDEN—In reply to your questions in detail, I beg to inform you that when statute labor was abolished our council adopted the only plan left for them, that is to raise all the money required by general township rate, and the increase in taxes is scarcely perceptible. But we find that one dollar expended by the council is equal to five days statute labor. We expend about $2,000 a year on the improvement of our roads and bridges. Every ratepayer wanting work done to give him an outlet for surplus water from his farm puts himself in touch with the council. They have to study the wants of every ratepayer, as well as the needs of the roads and bridges, and by having control of $2,000 or more, they are enabled to dig ditches to their proper outlet. No one is allowed to suffer by having water thrown in front of his place and left there until the next road master is appointed to carry it off. Roads are gravelled by the mile, all work is done in the early part of the year, and not when farmers have leisure time. All work is sold and received by the council. We have four road machines, and scrape every rod of road in the township each spring. We employ men to cut all noxious weeds found growing on the roads, and prohibit all stock from running at large. We believe that we are progressing in the right direction, and if you can suggest any improvement in our system of doing road work we should be most happy to hear from you.

STAFFORD—The township not being large it is not divided; we have one road commissioner. Road money is raised by special rate, and is equal to about 45c per day of statute labor. No change is contemplated except to divide the township into two divisions, but I think even this will not be done. We have a road commissioner who goes over the roads and lays out the work and gets the ploughing done; then the grader follows with four teams of horses; the man who operates the grader has full charge of the work and is also the time keeper. The leading men of the township would not go back to statute labor under any conditions. We have as yet had only a year's experience, but did more work than was ever done in two years before.

FULLARTON—The result has been quite satisfactory; more gravel has been put on and, what is better, the gravel has been put on where it is most needed.

YORK—The township is divided into four districts; all money is expended under the supervision of the township engineers, who appoint foremen over divisions in each district. There are some four divisions in each district.

GOULBOURN—We have found the new system gives good results and general satisfaction.

SIDNEY—There are five divisions and one overseer, who went over the roads of each division in company with a councillor of that locality, and divided the roads into minor divisions and made an estimate of the amount necessary to be expended on each minor division. The overseer then proceeded to engage competent men to superintend the work of each minor division. The collector tells me that in collecting the rate it is working all right and the general expression of the township is that they have no idea of going back to the old system, and pathmasters and road lists are a thing of the past.

BERTIE—Our by-law is quite similar to the Pelham by-law, and our experience at the end of the year was also similar to the experience of Pelham, viz., all the strenuous opposition, the condemnation, the fault-finding, the open threats to turn the council out and go back to the old, with a council elected for that purpose. When nomination day came there was no one to champion the cause of retrogression, and the election resulted in the re-election of all the members of the council of 1901, who in January, 1901, commuted statute labor in the face of a recent adverse plebiscite.

With the commuted statute labor funds more work and better work was done; the commissioners' salaries were paid, a road roller was purchased, and there remains to the credit of the said fund a matter of $500, with which to begin work for this

year, by getting out the material and placing it at the disposal of the commissioners.

ORILLIA—A good deal of discussion took place on nomination day and while defects were pointed out, there was no one who suggested a return to the statute labor system as previously in vogue here. It is generally conceded that much better and more permanent roads have been built in the past two years than in five years previously, but certain back roads have been somewhat neglected, and an endeavor will be made to remedy this this season.

BINBROOK—Twenty-six overseers were appointed. This was done principally on account of keeping the roads open in winter, but I am satisfied that it is a mistake to have so many.

TILBURY NORTH—We do away with statute labor entirely this year, I think.

MONCK—Everyone appears to be well satisfied with the change from the old system. so much so that the whole council was re-elected by acclamation, and all officers reappointed. Our statute labor was reduced from $1.00 per day to 75c; our township rate is 1-2 mill less on the dollar than last year, and the surplus greater than ever.

SOUTH NORWICH—The overseers are appointed as usual, the money paid in a lump sum to them and they let jobs, giving the ratepayers in their respective divisions a chance to put in their time at a contract price by the day or by the cord, if drawing gravel. The change seems to be now meeting with general favor; the people believe it to be ahead of the old system of worrying in their time to the detriment of the highways. We will let it run along a year or so, and then I think some improvement will be made. The council advances the money, pay the parties for their work and collect taxes in full. We spent $1,500 last year, and you can see a decided change. We get what we pay for, namely, a 1-4 cord of gravel instead of 1-8th.

CLINTON—There are a few parties in the township against commutation. They have brought out a man for two years past who was in favor of commuting half of the time, and he was defeated by a large majority both times.

DOWNIE—Last year being the first trial at commutation, I do not think it was managed as perfectly or to as good an advantage as it can be in the future. Experience always teaches. Labor was also higher than in former years, yet I think that if faithful work is performed under the old system of statute labor, that it cannot be excelled by commutation at 60c per day.

ANCASTER—One or two of the council are in favor of having only two salaried overseers ; the majority are in favor of present number.

NORTH GRIMSBY—The commutation system is quite satisfactory.

MACAULAY—The municipality of Macaulay has just had the past summer under road commissioners, and we find it worked to the satisfaction of a large majority of the ratepayers. A vote was taken at the nomination meeting, in December. whether we would continue under the new system or go back to the old statute labor. The result of the polls was 40 for the new system and 3 for statute labor, so I think that statute labor is a thing of the past in Macaulay, and there was a saving of a little over $200 compared with the expenditure of past years.

WHITBY—There are twelve road divisions, a commissioner for each division to make emergency repairs and act in conjunction with one member or council in expending commutation tax in division. Some considerable opposition was expressed at first, but is gradually wearing off. All of our present council have pronounced in favor of the system; some of them at first opposed. The majority of the ratepayers approve. The saving of money is apparent.

TECUMSETH—The system is giving general satisfaction.

BROMLEY—We intend giving the change a fair trial. At a council meeting on Monday the council made five divisions, instead of three as last year; the original divisions being too large for a commissioner to handle properly.

OTONABEE—The rate is 50c per day when a whole road division is commuted. otherwise it is 75c per day; to encourage other road divisions to commute, so as to get the whole township under it.

EAST OXFORD—A vote will probably be taken at the next municipal election on the commutation of all statute labor.

LANARK—The area commuting is the centre of the township, about four square miles, in which were 246 days of statute labor. Commuted at 75c per day this was equal to $184.50. No change is contemplated until the end of three years, the term for which the above change was made for an experiment.

BLENHEIM—Some more divisions talk of petitioning council to pass by-laws to commute their statute labor.

BASTARD—All statute labor will be commuted in a very few years.

BURFORD—Eleven divisions at present commute. Commutation is giving satisfaction in the divisions where it has been tried. Council are thinking of submitting the question to the people at the next election.

STAMFORD—The Reeve and most of the council are in favor of commutation, but are unwilling to do so without petitions; I enclose by-law. We have now in our township sixty-one road divisions, of which twenty-six are commuted and 35 uncommuted; pathmasters are appointed for the uncommuted roads. Two road overseers work or superintend the other two commuted districts.

NORTH NORWICH—Forty-four divisions out of forty-eight commuted statute labor; our by-law is optional with the divisions, and it has been gradually adopted since 1894. There are forty-eight divisions and an overseer for each division; our council are thinking of abolishing overseers and appointing two commissioners for the township to devote all their time on the work.

SARAWAK—The change was made in 1896, and works first class; would not go back to the old system on any account. There are twenty divisions in the two wards performing statute labor, twenty overseers and two road commissioners, working 606 days work; and two commissioners only for the two wards commuting statute labor. The commutation rate is 60 per day. One other ward will be under commutation this year. This ward voted 60 for and 20 against commutation; the fourth ward voted 6 for and 49 against. I think by 1903 the whole obsolete statute labor will be left behind.

KINGSTON—There are 75 road divisions, of these 23 are commuted. The change has been going on for 30 or 40 years. A change has been discussed for several years past, and has its promoters and opponents. I think a change is desirable.

SARNIA—There has been considerable discussion regarding a complete change to commutation, but no action has been taken so far.

NORTH OXFORD—Commutation of statute labor is optional; that is to say, if the majority in any road division wishes, by making application to the council they can commute at 60c per day for each day's work, if not they can pay the pathmaster 65c for each day's work, and if not paid at the time and put on the roll it is charged 75c per day as per by-law. The new by-law was passed January 13th, 1902.

ETOBICOKE—The village labor has been commuted for some years; other divisions are being added year by year as circumstances permit. A commutation by-law was submitted to the ratepayers in January, 1901, but was defeated by a small majority. A by-law commuting statute labor is now being discussed by the council.

COMMUTATION BY-LAW.

The by-law commuting statute labor in Pelham has been exceedingly successful in that Township, and has been largely used as a model in framing the by-laws of other municipalities. Although published in the last annual report of this Department, the growth of public feeling in favor of the cummutation system has created so many requests for additional copies of this by-law that it has appeared desirable to again include it in this report. Accompanying it is a communication from Mr. J. C. Crow, Clerk of Pelham, which emphasizes a number of important details, and discusses in a most interesting and instructive manner the new system of road management as developed by the experience of Pelham.

Preamble.

Whereas the highways of this municipality have been maintained by statute labor performed thereon, supplemented by sufficient grants from the township levies to meet all the expenditure connected therewith ;

And whereas for several years an agitation has been gaining strength to have the statute labor commuted or paid in money, instead of worked out as heretofore by the ratepayers under the direction of pathmasters chosen for each road or locality ;

And whereas the ratepayers of the township, at a public meeting recently called by this council to discuss with the Good Roads Commissioner of the Province the advantages of the commutation system, did express themselves as desiring its adoption, and the council believes that better results would be possible if the change asked for were inaugurated, and the commutation moneys thus available judiciously expended where most needed by one or two competent overseers to be placed in charge of all the public highways of the municipality ;

Be it therefore enacted by the Municipal Council of the Township of Pelham, and it is hereby enacted as follows :

All Labor to be Commuted.

1. Upon, from and after the passing of this by-law all statute labor to which any person (resident or non-resident) may be liable in this municipality shall be commuted at the fixed rate of fifty cents (50 cents) for each day's labor ; and the amount of each person's commutation tax shall be added in a separate column opposite such person's name in the collector's roll, and shall be collected and accounted for like other taxes, and shall be kept by the Treasurer in a separate account, to be known as "The Commuted Statute Labor Account."

Two Road Divisions Only.

2. The sub-division of the public highways of the township into ninety-eight statute labor districts, as at present, is hereby abolished, and in lieu thereof the township shall be divided for road purposes into two districts or divisions only (to be as nearly equal as may be), to be known as North Division and South Division ; North Division to comprise and include Concessions One to Seven, inclusive, and South Division the remaining Concessions, eight to fourteen, inclusive. The west half of the Concession Line Road, which separates these two divisions, shall belong to the South Division, and the east half to the North Division.

Two Road Commissioners Only.

3. Over each of these two road divisions there shall be appointed a single overseer, to be styled for the purposes of this by-law a "Road Commissioner," who shall hold office continuously during the pleasure of the council and who shall have the exclusive control and management of the maintenance, repair and improvement of all the public roads, streets, bridges and highways in his division, including the Township Boundary Line Roads bordering on the same, in so far as the commutation and other moneys belonging or appropriated to his division will enable him to do, subject always to such written instructions as he may from time to time receive from the Road and Bridge Committee of his division.

General Duties of Road Commissioners.

4. It shall be the duty of each of the Two Road Commissioners who may be appointed to carry out the provisions of this by-law : (1) To acquaint himself with the best and most modern methods of constructing and maintaining good roads, and of advantageously operating the tools and implements with which he may be supplied for that purpose ;

(2) To employ, direct and discharge all men and teams he may require to carry on his work;

(3) To begin the annual labor as early in the spring of each year as the condition of the roads will permit, and work continuously till the appropriation to his division for the year is exhausted ;

(4) To plane or scrape any of the roads in his division whenever in his judgment they may require it ;

(5) To keep the bridges, sluices and ditches in his jurisdiction open and in repair, and the highways free from obstructions at all times ;

(6) To properly protect by railing, or otherwise, all pits, precipices, deep waters, and other places dangerous to travel ;

(7) To see that the provisions of the Act to prevent the spreading of thisties and noxious weeds upon highways and road allowances are carried out ;

(8) To cause the roads within his division that are used by the public in winter to be made and kept open during the season of sleighing in each year ;

(9) To crown or round the roadways in the centre so as to shed the water to the side ditches, the crown on level roads not be exceed one inch of raise to each foot of width from side to centre ; and

(10) To perform such other services as may be required of him from time to time under the written instructions of the Road and Bridge Committee of his division.

Commuted Labor to be Supplemented from General Funds as Heretofore.

5. All expenditure for road materials, tools or machinery, or for jobs or contracts similar to what have hitherto been met out of the general funds of the municipality shall continue to be met from the same source, to be still known as the Road and Bridge Account, leaving the commuted statute labor moneys of each year to be applied in that year exclusively toward the maintenance and repair of the highways of the township in place of the statute labor, which has heretofore been used for that purpose. The total commutation moneys received shall be annually apportioned between and expended in the two road divisions established by this by-law, upon the basis of the assessed value of the property in each division, as ascertained from the assessment roll of that year, and the Treasurer shall charge each payment made by him to the fund and division to which same belongs, as defined by this section.

Paying for Work Done.

6. Each commissioner shall keep an accurate record of the men employed and the work done by him under this by-law, and he shall furnish to the Reeve in such written form and at such intervals as his instructions may require, properly itemized statements made up from these records and duly certified by him, accompanied by any vouchers pertaining thereto. The Reeve, having been satisfied of the correctness of such statements, may issue his cheques upon the proper fund, from which payment should be made, as per Section 5 above.

Roadways.

7. In order to remedy the inequalities that at present exist throughout the township in the width of those portions of its highways which are intended respectively for the use of vehicles and of persons travelling on foot, it is hereby further enacted that hereafter the Road Commissioners in reconstructing or re-grading any highway shall aim at a uniform standard width of track or roadway for vehicles of not less than twenty nor more than twenty-eight feet (according to the importance of the road) in the centre of each highway between the inside edges of the side ditches, unless the confines or formation of the road is such as to justify a deviation from this rule.

Gutters.

8. Ditches or gutters shall be constructed to drain every highway immediately adjacent to and parallel with the travelled roadway, and separating same from the foot-

paths set apart by the next section. Every side ditch shall be of such width and depth as its capacity may require, and shall have an outlet to which the water will flow freely and not be held to soak into and soften the foundation of the travelled roadway. The inside edges of all ditches shall be lined true and straight, and the sides evenly sloped. Shoulders must not be allowed to form next to the roadway.

Footpaths.

9. All those portions of every highway outside of the side ditches of both sides thereof (whether the ditches, as at present constructed or as they will be when made in accordance with this by-law), shall be, and the same are hereby set apart as footpaths or walks for the convenience or use of persons travelling on foot; and it shall not be lawful for any person to travel thereon on horseback or in wheeled vehicles, drawn by beast of burden or propelled by steam or electricity, under a penalty of not less than one dollar, nor more than five dollars, and costs, to be recovered before any Justice of the Peace in the county.

Remuneration of Commissioners and Others.

10. A day's work for all persons engaged by the commissioners under this by-law shall consist of ten hours faithful service, exclusive of the time spent going to and coming from work, but payment in all cases except upon job or contract work shall be by the hour. The remuneration to each of the two commissioners shall be fifteen cents for every hour necessarily devoted by him to his duties hereunder, and to the operators of the grading machines twelve and a half cents per hour; all others in the employ of the commissioners shall be paid such price per hour as may be agreed upon with the commissioner. The commissioners shall include a memo. of their own and their employees' time in the statements to be furnished to the Reeve under section six above.

COMMUTATION IN PELHAM TOWNSHIP.

Clerk's Office, Township of Pelham, Ridgeville, Feb. 13th, 1902.

A. W. Campbell, Esq., Commissioner of Highways for Ontario:

Dear Sir,—Your recent letter reminding me that our township has now had two years' experience with the Commuted Statute Labor System and asking me to point out the advantages and weaknesses of the new system, and how we propose to remedy the latter, was duly received and I now find time to reply. In my letter to you of similar purport about a year ago I measured the success of our first year with commutation by the attitude of the ratepayers as manifested at the annual election proceedings. I think this is a fair index of the pulse of the people, and am glad to say that, measured by the same test, commutation has gained strength, as at our recent annual town meeting no candidate nor even any ratepayer raised his voice against the new system. It is true there was some good-natured criticism of the methods pursued by the members of council and the two road commissioners, but some of it I thought was quite deserved, for manifestly it is absurd to gravel roads in the autumn right in the midst of the fall rains, or to use pipe for a sluice three times too large or too small; or to grade up a piece of road with loose unpackable sand six inches deep preparatory to gravelling it, and then fail to put on the gravel, etc., etc. The criticisms will bear fruit I am confident, as the officials will no doubt give due consideration to what they heard.

THE FEASIBILITY OF OUR BY-LAW. I spoke a year ago of how, in drafting our by-law, we made it quite general in its application, reserving matters of detail for the instructions which we proposed to issue annually to the commissioners. One reason for this course, as I then intimated, was because of our inexperience with the commutation system, and also because we were not able from any source to obtain a by-law to model after, which anywhere near came up to our ideas of what such a by-law

should be. I am pleased now to be able to say that we have only found it necessary to change the by-law in one particular—its last clause, which fixed the remuneration of the commissioners. Both these officers worked throughout the first year at the price named in the by-law, 15 cents per hour, but at the close of 1900 both resigned. One was a merchant with his time fully occupied, and the other thought it would pay him better to attend to his farm than to work for the township (with his horse and conveyance, which he required most of the time) at 15 cents per hour. The council, however, wanted his services and he was prevailed upon to continue by increasing his wage to 17 1-2 cents per hour. In the other division a new man had to be chosen, and he was got at 15 cents. He has shown himself to be efficient, and I have no doubt that this year his remuneration will be placed on a level with that of his colleague. The knowledge of road building each has acquired is worth a good deal. One year's experience in charge of half a township is worth a dozen as a mere pathmaster over a mile or two of road, the annual labor for which, under the old system, was put in in two or three days. Where we erred was in naming the remuneration of the commissioners in the by-law at all. We each year, at our first council meeting, pass a by-law fixing the salaries of all the officers for the year, and it would be quite the proper thing in that by-law to determine the fees of the road commissioners, which could thus each year be adjusted to our requirements.

One or two other minor changes I would suggest in the by-law. The last word in the first line of sub. sec. 8 of sec. 4 "used" might better be "required," so that the commissioner might use some discretion as to what roads he would open in times of snow blocades. It is unreasonable to expect every road, no matter how little used, to be shovelled out after every storm. I interpret sec. 561 (8 and 9) of the Municipal Act to bear out this view. Again, the provisions of sec. 6 for paying for work done are rather inadequate and hardly safeguard the pockets of the ratepayers in directing the Reeve to issue his cheques upon the presentation to him by the commissioner of a correct pay sheet. The Reeve can have no actual knowledge of the character or honesty of the work shown in any pay sheet which comes from a division quite distant from where he lives. It is likely that a remedy for this, this year, will be to require the Road and Bridge Committee of each division, the members of which should all the time have an eye upon the work being done by the commissioner, to examine and approve every pay sheet before it goes to the Reeve for payment. It seems to me that the R. & B. Committee might very profitably meet at the close of each month or half month (during the road work season) for the double purpose of passing upon the work done and approving the pay sheets for the expired month or half month, and to advise and consult with the commissioner as to the work for the next month.

I think the commissioners and many of our people are coming round to the belief that both the minimum and the maximum widths for vehicles fixed by section 7 of the by-law (20 feet to 28 feet) are too great. We have no highway which requires a roadway of more than 24 feet, and we have some so little used that 16 feet would be quite sufficient. Were these widths reduced there would be some saving in the first cost of grading, as well as in the annual after cost of planeing them each spring.

THE INSTRUCTIONS TO THE COMMISSIONERS. You gave publicity in your last annual report to both our by-law and the instructions issued thereunder to the commissioners for the year 1900. About the only change made in these instructions when the council revised them for 1901 was to further restrict the power given the commissioner by instruction number 1, so that instead of his being at liberty himself to let jobs or contracts up to $10.00, his limit was fixed at $5.00. This, I think, was the very opposite of what should have been done. With the experience they had gained their latitude should have been enlarged rather than diminished. Instruction No. 5 as to the appointment of foremen for snow purposes is faulty. When these big snowstorms came on which we are now experiencing, they caught the commissioners unprepared for them in that they had not yet appointed their foremen. I have had almost daily inquiries coming to my office for the past three weeks as to who the overseer or foreman is for this and that locality. The regulation should be amend-

ed so as to require the commissioners to appoint these overseers before January 1st of each year and to report their names to council at its last meeting in December or first meeting in January, or perhaps to have them announced at the annual town meeting at the close of the year or posted up in the clerk's office (as I have them now).

So much as to the practicability of our by-law and regulations. But when you ask how well we have carried them out I cannot be so enthusiastic, because I feel that in some important respects we have not lived up to our opportunity, or to the ideal we aimed at in our by-law. The most serious failure, I think, is the divided authority and jurisdiction which I referred to a year ago—part of the work being done by the Road Commissioners and part by the members of council. It was to cure this very evil that the change to commutation was made. Our by-law in its preamble states it to be the belief of the council "that better results would be possible if the change asked for (commutation) were inaugurated and the commutation moneys thus available judiciously expended where most needed by one or two competent overseers to be placed in charge of all the public highways of the municipality."

This idea of getting rid of the 98 pathmasters and road divisions and placing the highways in charge of a couple of competent men is further emphasized in section 3, which enacts that each commissioner "shall hold office continuously during the pleasure of the Council, and shall have the exclusive control and management of the maintenance, repair and improvement of all the highways in his division in so far as the commutation and other moneys belonging or appropriated to his division will enable him to do." The council must have been sincere in these enactments for in the instructions which they almost immediately afterwards issued to the commissioners they said :

"The council trusts that you fully realize your responsibility in assuming the charge of the seventy-five miles or thereabouts of public roads in your division. . . It will be your duty neither to neglect any road nor to give any more than its due share of attention. A good deal will depend upon your judgment in these particulars."

In keeping with this idea so often repeated we prepared and placed in the hands of each commissioner pay sheets containing double columns, one for the expenditure chargeable to road and bridge account (ordinary taxes) and the other the commuted labor outgo. You will remember that our by-law aims at having the commuted labor do just what the road work formerly did, all expenditure for plank, gravel, tools and contracts to be met out of general taxes as before. As the pay sheets were filed with me month by month during 1900 I could not but notice how little of road and bridge expenditure they contained. This meant either that the roads were being maintained solely with the commutation moneys, or else that the provisions of our by-law, which cost us so much time and deliberation, were being disregarded at the very outset, and that the jurisdiction of the commissioners was more on paper than real. The accounts which came before council and were paid at each succeeding session as of old, soon made it apparent that the commisioners had far from exclusive control. Some of these accounts bore the O.K. of the commissioners, thus making them quite eligible for insertion in the pay sheets as contemplated by the by-law ; but most of them were quite outside the knowledge of the commissioner, having been vouched for by members of council who thus indicated their intention of continuing to exercise more or less authority upon the roads which, by their by-law, they had handed over to the commissioners.

I very much regretted this failure to live up to the by-law which I felt might as easily be ridden through in any other particular, because this divided authority much lessened the value and usefulness of the commissioners who, to my mind, should be in full control (subject always to the direction and instruction of council), and who should be held responsible by the council and people for everything done or neglected on our highways. The council should direct, the commissioners perform. In evidence of what I have been saying you will be surprised to learn that while the expenditure on roads in 1900 out of ordinary taxes was $962.88, only about one-sixth of it was reported to council through the commissioners' pay sheets, $153.40 in one di-

vision and but $14.51 in the other. The other five-sixths came before council in the form of accounts from the various claimants as I have indicated. It almost seems as if the council places a different value upon commutation moneys to that given to money coming from ordinary taxes. The commissioners had free hand as to expending the former, but not so with the other. Each touches the ratepayer's pocket alike, and one should be as carefully husbanded as the other.

In 1901 the amount appearing in the road and bridge column of the pay sheets was still less, $140.06; but it doesn't look so bad, as the total road and bridge expenditure for the year was only $576.18. I think you will agree with me that almost every conceivable kind of road expenditure, except perhaps such as the purchase of a car of sewer pipe, etc., should have the sanction of the road commissioner, whose constant devotion to his duties should make him an expert in all these matters. In brief, everything possible should come to the council through the pay sheet. Even large bridges built by contract—we have no expensive ones—could very fittingly be entered there, as the commissioner, because of his experience, should always be one of the committee under whose supervision they are built. I am confident, too, that this change would be followed by a reduction of the number of council meetings and a shortening of the length of each sitting, as the time of council meetings in the past has been largely occupied with the consideration of road and bridge accounts, and making out Reeve's cheques to pay them. The new system may be credited with the saving of one council meeting already this year. For the first time in many years we are having no February meeting, at which it was our practice to appoint our army of pathmasters. Another all day sitting in May to apportion the statute labor will also be saved.

Last year I was able to say that the outlay for councillors' committee time—almost wholly at road work—was slightly less in 1900 ($73.50) than in the previous year under the old system. In 1901 it was again slightly reduced, being $65.25. This item would be cut in half were the councillors to hand over the control of the roads to the commissioners, without making a corresponding increase in the pay to commissioners.

A trial was given in one division last year to a traction engine to draw the road grader. I do not think, however, that it was considered superior to horses, though as they only had a home-made triangle for purposes of side draft, perhaps they were not properly equipped. Two or three ratepayers have suggested that money might be saved if the planeing of the roads each spring were done by contract, at so much per mile or trip, instead of by the hour. This is worthy of a trial.

I am sorry that I could not have answered your inquiry in much less space, but some people cannot be brief. Yours, in the reform,

J. C. CROW, Clerk Township of Pelham.

TOWNSHIP REPORTS.

That the present feeling throughout the Province with regard to road reform is in strong contrast with that which existed at the commencement of the good roads movement is evidenced by the many reports from township clerks favorable to the abolition of statute labor, and indicating that a change will take place in the near future. Among these reports are the following:

ELIZABETHTOWN—A change is being discussed and will probably take place in the near future.

SOUTHWOLD—I believe that the time is near when the present system of statute labor will be abandoned; there is a strong feeling in favor of doing away with the present manner of road making.

HARWICH—Commutation has been mooted, but has not been seriously considered, and yet I believe there are many decidedly in favor of the change.

JOHNSON—Council are in favor of commuting all statute labor, but think the question should be submitted to the ratepayers. By an oversight this was not done last January, and will probably not be done till January 1903. Any information your Department can give will be gladly received. The municipality owns a road grader.

ST. VINCENT—No portion of statute labor has been commuted as yet, though there is an agitation in some localities for commutation. The council propose taking a plebiscite (informal vote) in the matter at the next annual elections. The more progressive farmers desire a better and more thorough system of roadmaking than statute labor.

OXFORD—Some are for abolishing statute labor, others do not want any change. I do not know which is in the majority. I have personally advocated an assessment of 50c for each statute labor day. Most of the divisions would gain by it.

PUSLINCH—A by-law has been prepared dividing the township into four divisions as nearly equal as may be, commuting the labor at fifty cents per diem. Work to be performed under four road commissioners who hold office during the pleasure of Council. Wages, fifteen cents per hour. For hired labor, twelve and a half cents per hour ; day's work of ten hours, clear of going to and returning from work. The said by-law was presented to the council at their last meeting, was informally read and approved, by all the councillors. Three of the councillors expressed a desire to introduce and pass the by-law there and then, two councillors objected on account of the extra expenditure for smallpox, and the by-law was postponed until fall.

ONEIDA—I am satisfied that a great mistake is being perpetuated in not commuting the statute labor; I know that a good deal of work is not performed, and what is done is very unsatisfactory.

WEST WAWANOSH—A change is being discussed; we are having a public meeting on June 3rd.

NORTH GOWER—A change is discussed, but no action is expected to be taken until it is ascertained what action the county council will pursue in regard to the appropriation made by the Government.

WATT—A change is being discussed ; I am doubtful of it being put in force this year.

YARMOUTH—Statute labor division No. 15, being the unincorporated Village of Sparta, commuted statute labor. Applications will be made in March to have divisions 108 and 33 commuted; division 33 comprises the unincorporated Village of Union. The system of commutation where tried in this municipality has been satisfactory. I believe it is the proper way to deal with this important matter.

NEPEAN—Commutation is often discussed, the reeve urging it strongly (clerk assisting), but nothing actually done yet.

RAMSAY—The old system of statute labor is still in force. I think the council this year will take steps to have it abolished.

McNAB—There is a change contemplated, but nothing definite done in the matter only talk, some for and some against. The consequence is we have miserable roads. I think if the ratepayers were agitated in the matter they would go in for a change.

EDWARDSBURGH—A change has been discussed and I think it will not be long before statute labor will be a thing of the past.

MATCHEDASH—A change has been discussed, but no action taken. From my own point of view on those lines I would rather pay the tax than do the work, as I would be a gainer financially, and I believe better work would be done by contract.

RAWDON—I read your report last year with interest and believe if one were placed in the hands of every councillor it would prove effective.

HOWARD—Commutation has been discussed for several years, with no definite result.

EAST WAWANOSH—It is generally admitted that it would be a good thing if the old system of statute labor could be dispensed with and some other better system introduced; so far it is the only way of keeping up our roads, with a new road grader purchased last year.

VESPRA—No change is at present contemplated, though the matter of a change is often discussed by council and ratepayers. It is only a matter of a short time until a change from the present system will be made.

MARYSBURG, SOUTH—The council passed a by-law to do away with statute labor, but it was not legally done. It was done to get an expression of the people; the people are divided on the subject.

SOUTH WALSINGHAM—A change has been discussed for the last ten years; we have a grader, but it is very unsatisfactory working it with statute labor.

CAMDEN—Council are thinking of doing away with statute labor and repairing roads out of general funds.

RAMA—We intended to take a vote on the question this year at municipal elections, but all were elected by acclamation and it was left over for next year.

SCARBOROUGH—Commutation has been discussed for a number of years. The Legislature should abolish statute labor in the older settled portions of the Province.

AMHERST ISLAND—Commutation has been discussed, but not acted upon. In my opinion a tax of 25 cents on every day's work levied would accomplish better results than 50 cents, in case statute labor is not performed, as few pay.

NOTTAWASAGA—A change is being discussed and approved of by a large number of ratepayers.

HALLOWELL—It is a shame how our roads are worked. Not over one-half of the work is performed.

HARROWSMITH—A change is frequently discussed, but I do not think it will ever be different until the Government makes it compulsory to commute all statute labor, which, I think, should have been done years ago.

STORRINGTON—A few years ago a by-law was passed to commute the statute labor, but before the statute labor season arrived, some of the "old-fashioned, no-improvement people" created such a howl that the council called a special meeting and repealed the by-law; the statute labor is played out; the Government will have to take hold of the matter.

EAST WILLIAMS—We asked a vote to change, but did not state what system would take its place; I think a good substitute for statute labor laid before the people might cause the system to be abolished; there is not much discussion, yet everybody hates statute labor.

MARA—Commutation of statute labor is talked of, but that is all. Council have talked of submitting it to the electors to find out how many are in favor of the change. I cannot see any use in submitting it to the people at all, but if that is to be done I would like to see the matter discussed and the people educated in the matter, so that they might vote intelligently. I believe if voted on just now, a majority would be against the change.

WHITCHURCH—The farms fronting on Yonge street, and some village lots north of the village of Stouffville commuted statute labor; the people in the township are opposed to paying a commutation tax.

KALADAR, ANGLESEA AND EFFINGHAM—A change would be desired by those desiring good roads, but the old useless system of statute labor will never be abolished unless it is made by Provincial legislation.

CANBOROUGH—Our road work or statute labor is still done on the old system and no change is contemplated; we are ten years behind the times.

BRUCE—The question of commutation has been raised, but there appears to be an almost general desire to leave (as it is put) well alone, from the fear of an increased expense for road repairs.

ARTHUR—On the west side of the township one half of the statute labor was commuted and applied on the purchase of two road machines. They are paid for now and suppose things will revert back to the old system. There is considerable discussion, but I do not think there will be any change for some time to come.

TURNBERRY—Three or four years ago there was considerable discussion, latterly little or none ; but it is sure to come, sooner or later.

DEREHAM—Many speak favorably of commutation, although nothing definite has been done. Not even a vote of the ratepayers has been asked for.

PLYMPTON—We still adhere to the old system ; it is unjust and it would only be making it more unjust to commute at a specified rate ; very little is said about it.

McKILLOP—I think it would be a good act to compel all townships not to have more than four pathmasters.

ANSON AND HINDON—I have been trying to bring about a change in our township, as I think the sooner statute labor is abolished in our county the better, as we have very bad roads.

INNISFIL—I am in favor of knocking statute labor on the head, and each ratepayer paying 50 cents per day, to be collected in taxes ; appoint one or two commissioners, and I think more labor would be received and better roads.

LOBO—Some little discussion ; a change may be made some time in the distant future.

KING—Several attempts to change have been made, but the farming community are wedded to their idol, statute labor, or what ought more properly to be termed statutory indolence.

VAUGHAN—A change is not contemplated at present but may be soon.

MOORE—Statute labor is still being performed in this township, though in my opinion we could get better results if work was all commuted.

EAST GWILLIMBURY—A change is being discussed towards commutation, and progress is being made, though not very fast.

TOWNSEND—A change is being discussed.

SOMERVILLE—An effort was made last year to get a change in the method of road-making, or rather to change from no method to a method, but it failed, and since then there has been no agitation.

EAST HAWKESBURY—The people are beginning to discuss commutation and may succeed in some divisions.

BILLINGS—A change is being discussed, strongly in favor of commuting the whole statute labor at fifty cents per day.

CHAFFEY—Many of us think a change will be very beneficial.

HUNTINGDON—There is some talk regarding a change, but nothing definite as yet. The majority of the people would rather do the work than pay money.

MEDORA AND WOOD—By-law to be passed next meeting to commute all statute labor.

OSPREY—A change is being discussed.

HAMILTON—It is proposed to take a vote on the question of commutation at the next municipal election.

WILBERFORCE—A change is often discussed but meets opposition. Old system has outlived its usefulness here.

GOSFIELD NORTH—A change is being discussed, but there is strong opposition to it. If you could see any way to assist us in enlightening the ratepayers on this subject, you would greatly oblige.

WOLFE ISLAND—A change has been talked of for some time, but our people have not been educated to it. I think if you could favor us with an address on the subject it would very much aid in effecting the change.

WEST LUTHER—The council of this township took a vote on commuting statute labor at the municipal elections a year ago, but it was defeated. Some of us believe that if we could get you to give a lecture at our township hall, and have the matter properly discussed, a majority of the ratepayers of the township would be in favor of commuta-

tion. We were thinking of making the special rate for commutation 40 cents per day. Our day is only six hours.

SULLIVAN—At the nomination meeting, when about 300 ratepayers were present, the commutation system at 50 cents per day was discussed; an expression of the meeting showed a large majority in favor of the change; the council intended to consider the matter on February 3rd, but owing to the snow blocade they did not meet. They will likely talk it over at their next meeting on March 3rd. If you could help them to decide in favor of commutation, you will do our township a lasting favor.

SOUTH HIMSWORTH—Any information you may give us in reference to the best methods will be appreciated.

TILBURY EAST—The township of Tilbury East still follows old methods, but the advisability of adopting the commutation system is often discussed, and action may be taken soon.

KEPPEL—A change is being very much discussed; the statute labor has outlived its usefulness, although I think a majority of our township are against commutation. The experiment in the police villages has been an unqualified success, double the work being accomplished, even at 65 cents.

SAULT STE. MARIE.—The council are talking of commuting statute labor this year.

ELMSLEY SOUTH—A vote was taken at the municipal elections in January, 1901, on the following question and carried by a large majority: "Are you in favor of abolishing statute labor, and commuting at 50 cents per day?" "Yes or No"—129 voted "yes," and 40 voted "no." Nothing, however, was done by the councillors.

WEST WILLIAMS—The question of abolishing the doing of statute labor and levying a rate of 50 cents per day in lieu thereof, and spending the several amounts in the road beats by the township commissioners was submitted to a vote in 1900, and defeated by a narrow majority. The abolition is coming.

REACH—There is a strong feeling in the township in favor of a change, and the council have instructed me to prepare a by-law dividing the township into fifteen road divisions, with a commissioner for each division, but I am unable to say for certain whether the council will take any action the present year. They are all agreed that some scheme for the improvement of the roads other than the present is needed.

THE ROAD SURFACE.

A road surface of gravel or broken stone performs various services. The subsoil of clay or loam alone ruts readily, softens quickly after a rain, and has little supporting power. A well-compacted layer of gravel or broken stone over it distributes the concentrated wheel load over a greater area of sub-soil; it does not rut readily, and affords good surface drainage; it gives a smooth, hard wearing surface; water does not easily penetrate it so as to soften and reduce the supporting power of the subsoil.

The depth of gravel or stone to be used must vary with the quality of the material, the amount and nature of traffic on the road, and the nature of the subsoil. A dry, compact and stony subsoil, needs less metal than does a plastic clay, difficult of drainage. No definite rule can be laid down other than that from six to twelve inches of well consolidated material will afford a sufficient range to accommodate most circumstances. Under ordinary conditons ten inches of metal should accommodate the heaviest traffic to which a gravel or broken stone roadway can be economically subjected.

A very notable defect of most country roads is the flat or even concave surface. Others present the opposite extreme and are so rounded up as to be dangerously high in the centre, making it difficult for vehicles to turn out in passing. Roads must be crowned sufficiently to shed water from the centre to the open drains at the side, otherwise water will stand in the roadway, soak into it, soften and cause rapid wear and decay; but a crown higher than is necessary to properly drain the surface is also objectionable.

The amount of crown should not be more than sufficient to provide for surface drainage. A steeper crown than is necessary tends to confine traffic to the centre of the road, and in turning out, the weight of the load is thrown on one pair of wheels in such a way as to rut the side of the road. The shape of the crown is a matter on which expert road-makers differ, but with the class of material available for roads in Ontario, and the methods and plans of construction, a form as nearly circular as possible will be found most serviceable, and most easily obtained.

From the edge of the open drain the graded portion of the roadway should be crowned with a circular rise of one inch to the foot from side to centre. That is, a drive-way twenty-four feet wide should be one foot higher at the centre than at the side. This amount of crown may appear excessive, but with gravel roads, and roads metalled with the quality of stones commonly used, is not more than sufficient to provide for wear and settlement consistent with good surface drainage.

The elevation of the road above the level of the adjacent land, need not be greater than is sufficient to provide against the overflow of storm water, which should always be guarded against. The depth of the open drain must vary according to the amount of fall and the quantity of water to be provided for; also according to the sub-drainage needed and provided. When tile subdrains are used, the open drain can often be very shallow; in which case the width of the graded roadway can be narrowed, there being no danger of accidents such as are caused by a deep trench at the roadside. The tile drains should be placed below severe frost, and usually a depth of three feet will answer.

A degree of moisture is necessary in the summer season in keeping sand roads or roads over sandy ground in their best condition. One of the most lasting and beneficial improvements to sand roads is the planting of rows of trees on each side of the road, and close together to provide continuous shade. They will prevent, in part, the drying effects of the winds, as well as intercept the rays of the sun. For this purpose the white elm, with its arching branches, is most serviceable, and will add much to the appearance of the country.

GRAVEL ROADS.

The Province is very fortunate in having, over a large proportion of its area, a plentiful supply of gravel, suitable for road metal, and it has been used to a great extent in surfacing the ordinary country roads. Where it is to be obtained within easy hauling distance it, undoubtedly, is a most valuable material for use on country roads, and on many of the little travelled residential streets of towns. In localities where gravel is not within easy hauling distance it will be advisable to consider the use of other material; since gravel, if not found in the immediate locality and therefore expensive in transportation, will frequently be found less economical in final cost than a better, though higher priced stone.

Gravel may be described as a mass of fragments of stone, rounded and worn by the action of air, water and ice, the pebbles representing the hardest bits of the rock from which they were detached. With it, is commonly mingled a variable quantity of boulders, sand, clay and earthy matter. The rounded, water-worn character of the pebbles composing the gravel, does not permit as perfect a bond as is the case with a road-covering of crushed stone, in which the sharp angular sides take a firm, mechanical clasp.

Gravel has not very satisfactory wearing qualities, especially when it contains an excessive amount of earthy matter. Where much sand and clay is contained, these should be removed by screening, and the large stones and boulders should be broken. If there is a considerable proportion of the latter, a method which offers many advantages is to place a rock crusher with a rotary screen attachment in the pit, passing all the material through, thereby removing the earthy substances, and breaking the stone with one operation. If the number of large stones is not great, it will be the cheaper plan to

screen the gravel in the ordinary way, or, better, by a rotary screen propelled by steam, the large stones being broken by hand or used in the road foundation.

When being prepared for use on heavily travelled and important roads, care should be taken to remove the dirt from the gravel. Sand and clay, when mixed with gravel afford an easy means of consolidating the road covering in such a way as to be very suitable for traffic in dry weather. But in wet weather, moisture is absorbed, the roadway becomes soft and slushy, ruts form readily, and the bond will be found of a very temporary nature. For little travelled roads, it may be impossible to take the precaution to screen the gravel; and perhaps, if the earthy matter is not in excess, screening may be omitted to advantage ; it is necessary, however, to emphasize the point that this can be recommended for little travelled roads only. It is the stone, not the earthy material which is needed on the roads. There is enough dirt already on the roads without the township paying for hauling more. Nor should there be loose stones or boulders as they will work up and roll loosely under the feet of horses and wheels of vehicles.

When gravel is not screened, very much may be accomplished by care in selecting and taking it from the pit. In drawing gravel to the roads, it is frequently the case that teamsters wish to be in company with each other as much as possible. For this reason, when loading the gravel, while there may be room for only one wagon in the pit, at the point where the best material is to be found, a dozen teams will drive in and the wagons are filled with whatever stuff can be most easily obtained, whether gravel, sand, boulders or clay. Another common cause of earthy matter and sod being mixed with the gravel, is to be found in the practice of tunnelling under an overlying layer of soil, which gradually falls into the pit, is mixed with the metal, and is drawn with it to the road. This earth should be first stripped from the surface if it does not form too deep a strata, or care should be taken as it falls to keep it from mixing with the gravel.

In searching for gravel, the clearest indications are usually to be found along the banks of streams, where any extensive strata are apt to be exposed. A post-hole auger affords a convenient means of making tests over the surface of the soil for gravel, but the best implement is generally a simple form of drill. There are cases in which a gravel bed may be entered at the level of a stream bed, and water is thereby obtained for washing the metal by natural drainage, affording a cheaper means of freeing it from sand and earthy matter than by screening it. Gravel is still being deposited in drifts and bars by the agency of streams ; this wil be found to partake of the character of the pit gravel of the locality, but generally will contain less clay, although sand may easily be in excess. This is usually one of the best sources, as the gravel can be washed by natural drainage. Lake gravel is often a good metal, but varies greatly. It is apt to be slaty, and undersirable in quality. It will be free from dirt and clay, but usually contains sufficient sharp sand to secure consolidation, especially if a roller is used. Gravel which retains a perpendicular face in the pit in the spring, and shows no trace of slipping when thawing out, may generally be assumed to be sufficiently clean and free from clay for use on the road without any treatment other than is necessary to remove stones greater than one inch and a quarter in diameter.

A great many townships buy gravel by the load. This is very much like buying water by the pailful instead of digging a well. Gravel should be bought by the pit or by the acre, and should be available at all times for any farmer who wants to increase the value of his land by improving the road past it. Especial care should be taken by councils to see that, prior to the performance of statute labor, the pit is stripped and the gravel otherwise treated if necessary.

The majority of old gravel roads have been neglected in a number of particulars. They are allowed to become too flat to shed the water. The sides of the roads form square shoulders which obstruct the water in passing to the surface drains. Open drains are often deep and dangerous, but are not provided with proper outlets. If drains are merely receptacles for water, the subsoil of the roadway absorbs this moisture, is softened and in the wet weather of fall and spring travel forces the gravel

downward, and the mud to the surface, mixing the gravel and soil to such an extent as to very much destroy the usefulness of the road covering.

A great mistake is made when repairing these roads with a grading machine, by cutting off the shoulders and bringing the loosened material into the centre to round up the roadway If a portion of the shoulders happens to consist of clean gravel, this may be replaced on the hardened track of the road. But as a rule the shoulders are composed of fine stuff, sand, dirt, loose stones and sod, of the greatest injury to the roadway. This stuff is of such a nature as to at once roughen the road, while in wet weather it absorbs water, becomes soft and slushy, and ruins the hard gravel foundation underneath. The material composing these shoulders should be thrown outward across the open drains, and used in levelling the roadside, or it should be otherwise disposed of in such a manner that it will not injure the roadway. When these shoulders have been cut off, it will be advisable to pass the road scraper over the centre to take away as much fine stuff and loose stones as possible ; and on this a new layer of gravel or broken stone may be placed to complete the crown of the road.

The drainage usually found on existing roads consists of open ditches on each side of the graded portion, with a depth of about eighteen inches. They are frequently carried through rises of ground, past natural watercourses. Little attention is given to the regularity of the grade in the bottom, nor to the amount of fall, as evidenced by the varying depths of stagnant water at wet seasons. The object of these drains was more to procure earth to raise the centre of the road above the water line than to lower the water.

The best practice does not direct that the old open drains should be deepened for the purpose of draining the subsoil. Deep open drains are expensive, dangerous and unsightly, and the excavated earth generally does more harm than good to the road, when used to round it up, especially if piled on top of gravel. When the combined cost of construction and maintenace is considered, a tile drain laid under the bottom of open drains is cheaper and more serviceable. It is urged by some that one tile drain placed in the centre of the grade is the better plan. In the case of an old road with a hard surface this is very difficult and expensive, and the roadbed, if metal has been used, is destroyed by so doing. If any obstruction occurs with one central drain, in order to locate and remove the cause of the difficulty, the roadbed must be broken up, sometimes extensively. Where side drains are constructed, they not only drain the foundation, but they protect it by intercepting the soakage water from the adjacent land. Where open drains exist, as they do on the majority of roads, the cost of excavating for the two underdrains is lessened, and smaller tile may be used. Outlets can easily be had into the tile drains for surface water from the ditches, by the use of catch-basins when necessary, and this is rendered more simple when two tile drains are used.

The success of a drain largely depends on its outlets. Frequently its usefulness is largely removed if not entirely destroyed by the imperfect outlets on private property, the result of the opposition of the landowner, and the dislike of the municipal council to invoke the aid of the Municipal Act to enforce its construction. A drain without an outlet is useless. The secret of successful drainage is to dispose of water in small quantities before it gains force and headway ; and for that reason it should be carried away by natural watercourses as often as possible.

Sometimes townships are wasting an enormous amount of gravel, and in a few years will have to face a serious difficulty—that of finding a substitute. There are townships now not far from that difficulty; which have for years been piling gravel on badly drained, badly graded, badly maintained roads. The immense hollows on many farms testify to the large amount of material which has been used.

Gravel placed on a poorly drained, poorly graded road, the repair of which is not attended to at the proper time, is quickly rutted, and in the wet seasons of spring and fall is mixed with the soil beneath, its usefulness as a road covering being largely lost. But on the other hand, when the road is well drained, well graded, the gravel so laid upon it as to form a distinct coating, and ruts repaired as rapidly as they form, the life of the gravel is very much extended.

BROKEN STONE ROADS.

Broken stone, when of a suitable quality and properly applied, is a more durable surfacing material than is gravel. Owing to the greater cost, however, it is used by those townships only which have not a supply of gravel. As ordinarily used, broken stone gives less satisfaction than gravel, because the latter binds quickly under traffic owing to the presence of sand and clay. To get the best service from broken stone a road roller should be used to consolidate it ; otherwise the stones roll loosely for a considerable length of time. The feeling of councils with regard to its use is that it makes a passable road for a short time in fall and spring, but that a good dirt road for summer use is spoiled. Townships which have only broken stone for road metal, will receive decided benefit from the use of a steam roller, which will at once consolidate the stone and make a thoroughly good and smooth road for all seasons of the year.

The different kinds of stones for macadam roads cannot well be approached from the standpoint of names. Granite, limestone, sandstone, are names of different rocks common in this Province, but to say that granite is better than limestone, or that limestone is better than sandstone, while true, perhaps, of the best qualities of each, may be quite incorrect, since a good sandstone may be infinitely preferable to a poor limestone or granite. The best stone for a macadam road is that which is hard and tough, not easily affected by the atmosphere, moisture, or the varying conditions of climate. The choice will generally lie between a cheaper and less durable stone near at hand, and a more costly but better stone from a distance. A great proportion of the macadam roads in Ontario will be constructed of limestone, since this rock is the most common, quarries being within easy access of almost any part of the Province. In quality it ranges from that which is useless to that which is almost equal to trap. Limestone, which is tough and close grained, is an excellent material for roads on which the weight of traffic is not excessive. Some dolomitic limestones, while hard, appear to lack in toughness. Other limestones, of a slatey texture, have few wearing qualities, are rapidly disintegrated on exposure to the atmosphere, and should be avoided. Some limestones of an open, porous nature, yield readily in this climate to the effects of moisture and frost, merely turning into mud. But the excellent binding qualities of limestone make up largely for a lack of hardness, a sort of cement being formed by the dust, which adds very much to its durability.

In determining the best quality of stone for road purposes, there are four prominent destructive agencies which have to be considered : (1) The crushing action of loads; (2) the grinding action of the wheels ; (3) the blows from the shoes of horses; (4) climatic influences of air, water and frost.

With respect to the first three, a stone may have great hardness and splendid crushing strength, but at the same time be brittle, yielding readily to the grinding effect of wheels, and the blows administered by the hoofs of horses. On the other hand, a stone may be able to resist, in a measure, the second two wearing agencies, those of "abrasion" and "impact," and yet be so soft as to crush readily.

The fourth agency, the decomposing effect of the atmosphere, is one of very great importance. The denser stones, those which absorb the least water, are usually best able to resist the injurious action of frost and moisture. The weight of a stone is usually some indication of durability in this respect, the lighter stones being those of less density, and in consequence are the less desirable.

There are other features which a good rock for road-making should possess. When crushed they should break into a compact form. A stone that, in breaking, takes thin, flaky shapes, will not wear so long as one that breaks into cubical pieces, nor will it consolidate so readily in a roadbed, for a wheel, in passing over the side of a flat stone, will throw it out of place and loosen the stones adjoining.

The tests usually applied in determining the qualities of stone are those which indicate crushing strength ; the power to resist impact and abrasion ; the density, determined by the weight of the stone ; the amount of water absorbed. While elaborate trials may be made, a practical man can judge of the qualities of a stone by applying

simple tests ; by breaking the stone with the hammer ; wearing it on a grindstone ; crushing it in a blacksmith's vice ; scratching with an iron nail ; breaking small pieces with the finger. By such simple means, a general idea of the stone can readily be formed, but no test is so conclusive as actual wear on the road.

Broken stone produced from boulders is objected to as road metal on various grounds. The rounded sides will not permit consolidation with the minimum of vacuum. If they have been exposed to the atmosphere the boulders are very apt to be decomposed, are soft and will crumble readily. The mixture of different kinds of rock on the road surface, some hard, some soft, permits unequal wear, and produces a rough surface.

While these are defects which certainly are not to be overlooked in the choice of a road metal, boulders, nevertheless, constitute a very valuable material for the construction of a road, particularly in localities where they are plentiful and gravel or bed rock not readily obtainable.

In selecting field boulders, care should be taken to discard all rock which shows signs of having "weathered" or decomposed by the action of the atmosphere. Sandstones and granites are peculiarly subject to this disintegration, while soft limestones are very common. Rocks which should be condemned from this cause are those which crumble readily under successive blows of a hammer, or which show iron stains when broken. A little experience will quickly teach a judicious roadman to detect the stone which is unfit for road purposes.

Railway companies have signified a desire to assist in the building of roads, especially those leading the traffic to their own lines, and in some instances have delivered the material free, in others not charging more than half freight rates. When they are permitted to carry the material at slack seasons, they have expressed a willingness to do the work at actual cost of hauling, which would place these municipalities in a position to procure first-class material at less cost than others where material is considered plentiful. In this way, too, many towns and cities now using gravel of an inferior quality would be enabled to use a first-class quality of durable material.

DIRT ROADS.

Nearly all roads in Ontario have at one time been "dirt" roads. By a slow process of evolution some have become gravel or broken stone roads. A dirt road nicely crowned and well drained will make an excellent foundation on which to place a layer of gravel. A driveway which has passed through an apprenticeship as a dirt road, and has, during that time, had due attention given to its drainage requirements, will have indicated the points at which open drains, culverts and underdrains are most needed. With these provided, gravel can be applied to the best advantage. The little wear to which they are subjected, however, rendering their maintenance very simple, will make the time required for their improvement comparatively short.

These dirt roads are very much abused by the road-makers. With each year's statute labor, sod, vegetable mold and stones are brought to the centre of the road, to be mixed with mud during the period of fall rains. For six months of the year a dirt road is often as good a driveway as could be desired for light travel. In order to extend its usefulness the greatest care must be taken to see that drains and culverts are placed wherever needed, and that they are always in good working order. It should be well-crowned, or rounded up, so as to shed the water freely to the side ditches ; but in making this crown, sod and vegetable mold should be carefully excluded. A great deal of injury is done to this kind of road by running a grading machine along the edges, bringing loose stones and sod to the centre. This stuff should be thrown outwards and across the open drain. Under-drains should be used judiciously ; while a complete system may not be used, tile drains should at least be placed where the water does not leave the side of the road early in the spring, or wherever the ground appears to be continually damp. If open drains are kept in good working order, and if the road is kept properly crowned, its condition in fall and spring will indicate the points at which tile drainage is most needed.

UNDERDRAINAGE.

It may be accepted as a general rule that roads tiled without gravel are better than roads gravelled without tile. All roads except those on pure sand can be improved by tile draining. A single line of tile, if placed about three feet below the bottom of the open drain, if the graded portion of the road is about 24 feet wide, would accomplish nearly all that tile drainage will do. If one side of road is higher than the other, lay the tile on the high side so as to intercept the subsoil water as it flows down the slope. A four-inch tile meets most conditions, but the size will depend on the length of the drain and the amount of water to be carried away. Care must be taken to give the tile a uniform grade, so that there will be no depressions. If possible, give a fall of at least three inches in one hundred feet. The cost will be about fifty cents a rod. The work, if properly done, will be a permanent and substantial improvement to the road, and will save many times the cost by lessening the amount of gravel needed on the road.

The name "macadam" is commonly applied to any road surfaced with broken stone and in this respect is a very unfortunate misnomer. It is the neglect to provide for a dry subsoil that is the greatest cause of the unfortunate condition of roads throughout Canada to-day. Roads which are not well drained are but a repetition of the English roads as they existed before the time of macadam—they are the roads which the system of Macadam displaced. A roadbed in which sub-drainage is not sufficiently provided, is the opposite of a macadam road.

The importance of drainage cannot be too thoroughly impressed. Clay in thick beds, when dry, will support from four to six tons per square foot of surface, according to the quality of the clay. If only moderately dry it will support only from two to four tons per square foot of surface. If the clay is wet and soft it will yield to almost any load. Gravel, if well compacted, forms a much stronger roadbed, is less yielding to the action of moisture, and for this reason, even for a thin surface coating, strengthens the road somewhat. But the real strength of the road must lie in the subsoil. Vegetable molds and alluvial soils are weak, have a sustaining power of only one-half to one ton per square foot, and for this reason it is well to remove such soils, securing, if possible, a gravel, clay or sand foundation.

A dry subsoil becomes of greater necessity in a cold and humid climate, such as prevails throughout Ontario for a considerable portion of the year. The injury done to roads by frost is caused entirely by the presence of water. Water expands on freezing, and the more there is under a road and above frost line, the greater is the injury. In freezing, the particles of soil in immediate contact with the water are first compacted. When room for expansion ceases within the body of the soil itself, owing to its saturated condition, the surface is upheaved. When thawing takes place the subsoil will be found honeycombed, ready to settle and sink beneath traffic. It is therefore of the utmost importance that the soil should be relieved of all water of saturation as quickly as possible by under-drainage. The impassable condition of the roads during spring, often axle-deep with mud, is to be attributed very largely to a wet subsoil which has been honeycombed in this manner.

The making of a strong foundation thus resolves itself into a question of underdrainage, and the means whereby proper under-drainage is obtained must be adapted to the manner in which water finds its way under the road, and the nature of the soil. A soil retains in its texture, by capillary attraction, a certain amount of water. In the case of a plastic clay soil, which will absorb nearly one-half its weight, and bulk of water, the water retained in this way may be the cause of injury. In the case of gravelly, sandy, or other porous soil, it is necessary to remove only the water held by hydrostatic pressure in the foundation of the road. The effect of this is, that, with a clay subsoil, underdrains are nearly always beneficial in securing a strong foundation, and are necessary for traffic of even moderate degree. With porous soils, on the other hand, the

necessity and means of drainage will depend upon the height to which the water rises in the foundation, and the direction from which it comes. When a strong foundation is needed, these under-drains should be three or four feet below the surface of the subsoil.

Their location with respect to the road should be varied with circumstances. The most effective type of drainage employed is a system in which there is a tile drain on each side of the roadway underneath the open gutters, with V-shaped drains at intervals from the centre of the roadbed to the side drains. From this the scale descends to drains at the sides of the roads only; then a drain at one side only, or in the centre of the road; then only an occasional drain at springy or damp points.

It is of advantage to understand the manner in which under-drains act in different cases. With porous soils, in which the water rises under hydrostatic pressure, the water enters the tile from below; just as water rising in a vessel finds an outlet in the sides or flows over the top, so the underdrains supply the necessary outlet for this excess moisture at a proper depth from the surface ; it "lowers the water-line."

With clay the process is different. Absorbing and holding as it does, like a sponge, a large quantity of water, drains are less effective, but none the less necessary. The cracks and fissures which appear throughout the surface of a baked soil during the summer drought, afford a clue to the action of under-drains upon the soil. As the clay yields up its moisture, it shrinks, is torn apart. These fissures commencing at the drain spread in different directions, and each fissure thus becomes a new drain leading to the tile. This process goes on, the fissures become filled with sand, vegetable and other porous matter, so that they assume a degree of permanency, and, in clay soils, underdrainage is more effective after several years than at first.

BONDING THE ROAD.

The "bonding" of a road covering, is a matter very frequently discussed. Some road-makers advocate the use of a foreign binding material, mixed with the stone, such as sand, loam or clay. It is generally conceded by the best authorities, however, that the less foreign material incorporated with the stone, the better. The best roads to-day are bonded by intermixing with the broken stone, the chips and dust created in crushing, and by thorough rolling. A dust of stone suitable for road-making will form a cement which will unite and re-unite after being broken, and added to this is the mechanical clasp which stones assume after sufficient rolling.

The use of sand as a binder, while it lessens the amount of rolling required to produce a hard surface, tends strongly to injure the durability of the roads. When these foreign binders are used, the road is more easily permeated by water, and in wet weather such as we have to guard against stringently in a Canadian climate, the bond is less perfect, and the road is more readily rutted, the presence of sand having prevented as strong a mechanical interlocking of stones.

ROAD MACHINERY.

We are living in an age when economy of labor is being sought in every branch of manufacture and construction. To enable one man to do the work of two by the use of labor-saving machinery is the tendency of development in every department of

labor. The use of machinery in road-making is assuming prominence, and as a result we are enabled to obtain not merely greater economy, but actually better and more finished work on the highways. Of these machines, road graders, rock crushers, and rollers are the best known and most commonly used. To the list can be added wheeled scrapers for earthwork, especially useful in making cuts and fills ; also the implements for making cement-concrete pipe for culverts, and minor appliances for the convenience of labor.

The machinery of road-making, like the machinery of farming, has developed very materially of recent years. A full plant, for complete, economical and serviceable work is expensive. Cities can afford such a plant, nearly every city in the Province and a number of towns having supplied themselves with a full outfit of road-making machinery.

A Colonization Road.

Townships, however, cannot as a rule do this. A road grader is all that the great majority will buy, and some have not even done this. Some few have bought rock crushers. The result is that only the very simplest of road-making appliances are available for use on the country roads. The main roads, many of them heavily travelled, receiving all the traffic from a large territory, receive almost the same treatment in construction and maintenance as do the back concessions.

There is one, perhaps there may be said to be two, exceptions, and these point to a feasible plan for obtaining proper machinery for the heavily travelled roads. The County of Hastings, on its system of county roads, makes use of graders, a traction engine, a rock crusher, and a steam roller. In the County of Victoria, while it has not a system of county roads, the council purchased a roller and rock crusher, to be used by the different township councils, a plan, which, while an improvement, does not achieve the full success it deserves. The only system as yet suggested whereby these machines can be made available on our roads, is under a complete county system, where the roads subjected to heavy travel will receive the treatment they so urgently demand, both on the ground of economy and more efficient service.

The Road Grader.

Road graders are now so commonly employed in the construction and repair of roads, and their utility is so generally recognized, that it is scarcely necessary to urge their adoption. They are modern, labor-saving implements which do their work better and more cheaply than can be done by hand, and that nearly three hundred townships of Ontario have purchased them is forcible evidence of their value. It is not their use which it now seems necessary to urge, but rather there is need of guarding against their mis-use.

In too many townships the councils have rested content with merely buying a grader, and having done this, seem to be satisfied that they have done their full duty. Unfortunately the grading machine is not possessed of intelligence,it does not know when or how a road should be graded. So that, unless a method is established, and unless a capable man is engaged to operate it, the grader is likely to give but little service. There are several questions which naturally present themselves in connection with the use of a grader which councillors and road commissioners should distinctly answer.

When Should the Grader be Used?

Arrangements should be made every spring to have the grader ready and in use as soon as the ground is sufficiently dry. The soil is then in its best condition for manipulation, having been mellowed by frost; the roads are rough and most in need of treatment. Roads which are properly graded early in the spring are at once compacted by traffic and they will remain in their best condition all summer. If the work is left until late in the season, clay soils have become baked and hardened, difficult to handle and rough when finished. Sandy soils, if loosened up late in the year, will be much more dusty than if treated early in the spring, when they are damp and readily compacted by traffic.

Where Should the Grader be Operated?

This is a query which few townships have answered satisfactorily, and it is of first importance that they should do so. It should be the duty of the township road commissioners, councillors, or a committee of the council (according to the local system of road management) to go over the roads in the spring, and determine what grading is required.

This work should be staked out according to definite widths and dimensions of the roads as required by township regulations. The grader, when it commences in the spring, should proceed to each piece of work consecutively, and should be in use continuously until all the grading is done for that year.

At the present time it is customary for the grading machines to go here and there over the township without method—one day on one side of the township, next day on the opposite side, then to another distant part, backward and forward, wasting a considerable part of the wages of men and teams in moving from one part of the township to another. By following a well-considered schedule the cost of moving the machine between the different pieces of work is reduced to a minimum.

Some distinction should be made between the grading of new roads and repairs of old roads. Where the roads are being metalled from year to year with gravel or broken stone, it is, as a rule, a waste of money to grade a greater length of road than can be gravelled or macadamized the same year.

Who Should Operate the Grader?

One of the first essentials in providing that the roads will be properly graded is to select the right man to operate the grader. He should be an active, energetic man, with some mechanical experience; one who will take an interest in his work, who will make a study of road-making and who will be willing to follow the instructions given

him by the township road commissioner or councillor having supervision of the work. When such a man is found he should be engaged from year to year so that his growing experience will render him more efficient.

There are many townships which do not employ a regular operator, but instead allow the grading machine to be handled by anyone and everyone. In some cases it is even passed around in the performance of statute labor from beat to beat. Managed in so careless a manner, a grading machine will be a source of disappointment only.

How Should the Grader be Operated?

The same horses should be used in operating the grader for an entire season, at least. "Green" horses are very awkward, will not pull together, waste much time, and even a reliable man as operator cannot, under such circumstances, perform good work. It is a great waste in many ways to attempt to use a grading machine with horses provided, as is sometimes done, as a part of statute labor. Horses used continuously become accustomed to the work, to each other, and to the driver, and will produce much better results.

Some townships, instead of horses, use a traction engine. Where one can be rented from a local thresher, it can usually be obtained very cheaply in the early part of the year. Where a considerable stretch has to be graded without turning, as in cutting off the shoulders of old gravel roads, a traction engine is much preferable to horses. It is more steady and does not stop to rest.

How should the Roads be Graded?

The township regulations as to the width and dimensions of road should be closely followed in grading. These will generally provide for a width of twenty-four feet between the inside edges of the open drains on roads of greatest travel; twenty feet on roads of moderate travel, and eighteen feet on roads of least travel. A rise of one inch to the foot, from the inside edge of the drain to centre of the road is ample crown for a new road, after the gravel or stone has been placed on it. More than this is unnecessary and an injury. There is a tendency in the use of graders to crown the roads excessively, and this should be guarded against.

Road graders are of much use in the repair of old gravel and stone roads, in restoring the crown, but unfortunately it is no exaggeration to say that miles of road have been ruined by mis-use of graders in this work. Old roads are commonly flat, sometimes concave, with square shoulders at the side. In repairing these roads there may be a small amount of stone which has been crowded out by the wheels of vehicles, and which it is safe to draw again to the centre of the road. On no account should the square shoulders at the side be drawn to the centre of the road. These shoulders are composed of earth and sod, and if placed on top of the old gravel or stone foundation will merely turn to slush in wet weather and utterly ruin the road. The only way to repair such roads is to cut off these shoulders, throwing them away from the road across the open ditch, if necessary, and then to restore the crown by placing a coating of new gravel in the centre of the road.

Grading machines are exceedingly valuable implements in road-making, but there is a proper time, place and way, and councillors using them cannot too soon provide a practical solution.

The Rock Crusher.

A rock crusher is a valuable implement in many localities, and a number are now owned by municipalities in Ontario, chiefly, as yet, towns and cities. About fifteen townships have purchased them, while a number of others rent them, or contract for crushed stone at a rate per cord.

These machines are made after various patterns, the main division being into rotary and jaw crushers. Some of smaller size are set on wheels and may be moved

readily from place to place. Others are for stationary work, in a quarry, or at a point to which stone, field boulders, etc., are brought to be broken. They are operated by steam power; a traction engine, or stationary engine, as circumstances render most advantageous. Some municipalities owning a steam roller obtain power from it, but this is apt to injure the roller.

One of the most valuable features of a crusher is that by attaching to it a rotary screen, the crushed stone may be separated into grades according to size, usually such as will pass hrough a three-inch ring; such as will pass a one and one-half inch ring; and fine chips and screenings. By placing the coarse stone in the bottom of the road, and the finest on top, a smoother and more durable road is obtained. An average cost of a crusher is $700 or $800, and with it stone at the crusher may be crushed for from 20 cents to 30 cents per cubic yard, according to the kind of crusher and the quality of the stone.

The Road Roller.

The advantages to be derived from a road roller in the construction of a broken stone road are becoming more and more appreciated. Unless a roller is used, the stone must be spread loosely on the road, and left for traffic to consolidate. A road should be made for traffic not by it. To leave loose gravel and stone in the roadways is neither an agreeable method of constructing a road, nor will it produce the most durable road.

The consolidation of loosely spread stone or gravel by traffic is a slow process, causing much inconvenience to travel,during which the earth of the subsoil becomes mixed with the stone. Earth intermixed with stone prevents the strong mechanical bond which clean metal will assume when the stones are wedged one against the other by a roller. The particles of earth, when wet, have a lubricating influence on the stone, and under the action of wheels the surface is more readily broken up. By the use of a roller the earth subsoil should be first thoroughly consolidated. The stone should be placed on this foundation in layers, and each layer well compacted. In this way a smooth, durable, waterproof coating of stone, free from earthy material, can be laid over a firm foundation.

There are different classes of rollers. The horse roller, weighing six or eight tons, will do fairly well if a steam roller cannot be afforded, but the horse roller is not sufficiently heavy for the best results. It has to be used much longer than the steam roller. The feet of the horses, in exerting sufficient strength to move the roller, sink into and disturb the road metal, and injure the shape and quality of the roadway, while on hills it is at a disadvantage.

The steam rollers are of various weights, ranging from eight to twenty tons. Rollers of fifteen tons weight are those generally used by the towns and cities of Ontario. The cost of horse rollers is usually about $90 per ton, or from $500 to $600 each. Horse rollers are, however, generally so constructed that the weight may be increased by iron castings; so that a roller of five tons may be made to weigh about six. Steam rollers cost about $3,000. For operation a horse roller, with two teams, will cost $6 per day. A steam roller will cost $10 a day, but will do three times the amount of work done by a horse roller, so that the saving in operation is considerable.

TILE CULVERTS.

A great number of townships throughout the Province have largely discarded timber as a material for small culverts and sluiceways. Cedar, where obtainable, has been most commonly used, but all varieties of suitable lumber are becoming scarce, the price is constantly increasing, and the quality now available is far from being equal to that of former years.

Those municipalities which have experimented with vitrified and concrete tile have, with very few exceptions, been favorably impressed with the new material. Failure

and some dissatisfaction are occasionally reported, but this in every case can be traced to causes not in any sense condemnatory of the new materials. Where any kind of tile is used there are certain requirements which must be observed. In the first instance the tile must be of good quality. It is just as necessary to use good tile in culverts as in sewers ; where "culled" tile are used, failure is, almost of necessity, the result. These tile must be perfectly sound and straight, not warped or mis-shaped in any way, otherwise good joints cannot be made, water will lay in hollow places, and culverts are apt to wash out.

Making Concrete Culvert Pipe.

Excellent culvert pipe of concrete can be manufactured cheaply in any gravel pit under the immediate direction of the road overseer. The pipes are from two to four inches in thickness according to diameter; which latter may safely and conveniently reach three feet, in lengths of two and one-half feet.

The implements required are of the simplest kind. The most important are two steel, spring cylinders, one to set inside the other, leaving a space between the two equal to the thickness of the finished concrete pipe. By "spring-cylinder," it may be explained, is meant such a cylinder as would be formed by rolling a steel plate into a tube without sealing the joint. With the smaller of these cylinders the edges overlap or coil slightly, but are so manufactured that the edges may be forced back and set into a perfect cylinder. With the larger, the edges do not quite meet, but may be forced together and fastened. Accompanying these molds are bottom and top rings, which shape the bell and spigot ends of the pipe.

The two cylinders, with joints flush, are set on end, the one centrally inside the other, and on the bottom "ring," which in turn rests on a firm board bottom. The concrete, made of first-class cement and well-screened gravel in the proportion of one of cement to three of gravel, is then tamped firmly but lightly into the space or mould between the two cylinders. The tamping-iron used to press the concrete into place is so shaped as to fit closely to the cylinders.

The concrete is allowed to stand in the mould for a short time, when the cylinders are removed ; the outer and larger cylinder by removing the clamps, and allowing the edges to spring apart ; the inner cylinder, by removing the fastenings, so as to allow the edges to again overlap, returning to the shape of a coil. The outer cylinder having thus been made larger and the inner one smaller, they can readily be taken away, and the concrete pipe is then left until thoroughly hardened. For the larger sizes, the two halves of the outer cylinder are usually hinged, and can be more carefully removed than when allowed to "spring" from the concrete.

Just such a number of pipe as are actually required for the season's work need be manufactured ; the implements required are inexpensive, and the pipe may be made by the municipality for actual cost, which, after a little experience, can be reduced to a very small amount.

If cement concrete pipe are employed, they must be of first-class quality. They must be well shaped, as with sewer pipe, and all the rules for making a good concrete

must be observed—that is, the material composing the concrete (cement, and gravel) must be of good quality, and properly mixed. The making of good concrete is not a difficult matter, but it is sometimes hard to find men who will follow directions. Dirty sand or gravel, too much water, careless and insufficient mixing, neglect to see that the materials are used in the right proportions, are the defects most commonly found. Concrete cannot be mixed like common mortar, and an attempt to do so is far too often made. It is affirmed by cement manufacturers that masons are the greatest offenders in this respect; that it is almost impossible to get them to follow any system other than that to which they have been accustomed in the use of common lime; and that, therefore, an entirely inexperienced but practical man, who will follow directions, will often make the best concrete.

To meet with success in the use of tile culverts they must be put in place properly. They should be laid with a good fall on a regular grade to a free outlet, in such a way that water will not stand in them.

The tile should be laid with the spigot end down grade, and the joints made tight with cement mortar. If the joints are open, water will work its way along the outside of the culvert, and finally make a considerable channel, which will allow the culvert to get out of line and finally result in a "cave-in." To prevent the water finding its way along the outside of the pipe, it is advisable to protect the ends with concrete, stone or brick head-walls.

Care should be taken to excavate a concave bed for the pipe, with depressions for the bell of the pipe to rest in, thus securing an even bearing, without which a heavy load passing over before the culvert has properly settled into place may burst the tile. Tile cannot be used in very shallow culverts, but must have a sufficient depth of earth over them to protect them from the direct pressure of heavy loads. The depth of covering necessary increases with the size of the pipe. At least a foot of earth over the top is advisable in every case; but for culverts of two feet in diameter or over this should be increased to at least eighteen inches.

The earth should be well packed and rammed around the tile to secure a firm bearing, and light soils should not be used immediately over or around the culvert. A heavy clay, a firm gravel, or a compact sand or gravel will answer, but vegetable mould, water sand, and light loams are subject to wash-outs.

At the outlet the culvert should be set nearly flush with the surface of the ground. If set higher than the surface, the fall of water will wash out a depression, and in time will undermine the end of the culvert. A too rapid grade will have the same effect, and it is well to cobble-pave an outlet where this undermining action is likely to occur.

Culverts, in many townships, are very numerous, and necessarily so. Water should be disposed of in small quantities, along natural watercourses, otherwise if gathered in large bodies along the roadside, it gathers force and headway, resulting in extensive wash-outs, and is in every way more costly to handle. Water should be taken away from the roads as quickly as possible, for it is excess water that is the great destroyer of roads.

Culverts, in addition to being a matter of considerable expense to municipalities, are too often in a bad state of repair, sometimes dangerous, and when not level with the roadway, are an annoyance and interruption to traffic. Good road-making is largely a matter of good drainage, and culverts are a detail of drainage upon which municipal councils should bestow a great deal of attention, with a view to greater permanency, increased efficiency and a reduction of cost.

CONCRETE ARCH CULVERTS.

The concrete arch culvert is, in a number of municipalities, replacing the old form of timber structure. Greater in first cost, the concrete culvert, if rightly constructed, is a permanent work, and as such will, in a term of years, effect a considerable saving in road expenditure. The greater portion of the annual road appropriation is, in many townships, spent in repairing and rebuilding wooden culverts and sluiceways. The life of timber in this work is very short. Wooden culverts are quickly upheaved by frost, warped by the sun, and decayed by moisture. Wherever concrete culverts have been fairly tested they give satisfaction, and their general use by a township will mean, in the course of a few years, a marked reduction in the cost of this branch of roadwork.

The stone arch is designed on the principle that it will remain in place without the use of mortar. The concrete arch, on the other hand, is a monolith, dependent upon its cohesive strength. That the concrete arch is dependent upon cohesive strength points to the necessity, in construction, of a generous proportion of cement, very great care in mixing the concrete, and a good quality of all materials employed.

A concrete can best be regarded as a mixture of mortar and broken stone, the mortar being formed from a mixture of sand and cement. Given a sample of broken stone in a vessel, the requisite quantity of mortar can be gauged by pouring water into the vessel until the stone is submerged. The quantity of water used will indicate the amount of mortar required to completely fill the voids in the stone. The proportionate amount of cement needed to fill the voids in the sand can be gauged in the same way. The proportions of cement, sand and broken stone obtained in this way would provide, with perfect mixing, a mortar in which the voids in the sand are filled with cement, and each particle of sand coated with cement; it would provide a concrete in which the interstices of the stone are filled with this mortar, and each stone coated with mortar. This would be the case with perfect mixing, and would provide a theoretically perfect concrete. Perfect mixing is not possible, however, and it is necessary to provide an amount of cement in excess of the voids in the sand, and an amount of mortar in excess of the voids in the stone.

With proper mixing and good materials, a satisfactory concrete for bridge abutments can be formed from cement and broken stone, in the proportions of one, three and six. It is recognized that the greatest strength in concrete can be obtained by making the mortar rich in cement, rather than lessening the quantity of stone, but beyond providing for a strong adhesion of mortar and stone, little is gained by making the mortar materially stronger than the stone. This applies to crushing strength, however, rather more than to the tensile strength required to some extent in the arch. For the arch proper, it will be well to use a richer concrete, in, say, the proportions of one of cement, two of sand, and three of broken stone.

The cost of the abutments may be lessened, where they are of sufficient thickness, by the use of rubble concrete. The casing or curbing must be built up as the laying of the concrete proceeds. Within the casing and firmly tamped against it, there should be placed fine concrete to a thickness of about six inches. This will form a shell for the abutment, inside of which large stones may be placed in rack-and-pinion order, ends up. There should be a space of at least two inches between the stones, filled with fine concrete, and all firmly rammed. The outer shell of fine concrete should always be kept built up six inches or so in advance of the rubble work. The rubble should be laid in layers, and each layer well flushed with a layer of fine concrete.

The lumber used in making the curbing or casing should be dressed, tightly fitted and firmly braced, so that the concrete may be well rammed into place. The framework should be closely boarded up against the work as it proceeds. The centering for the arch should be well formed. The ribs should not be farther than three feet apart. The lagging should be three inches thick and dressed to the intrados of the arch. All the framework, centering and supports should be substantial and well constructed. This framework is a considerable item of expense in the building of a culvert, but it can be

used as often as it may be required for arches of similar span. The exterior of the culvert when finished should have a smooth face, free from holes, and a surface grouting, which is of little use, should not be necessary.

There is some difference of opinion as to the relative strengths of gravel and broken stone in concrete. The natural inference is to suppose that a rough, irregular surface will secure greater adhesion than one that is smooth. However that may be, there is little reason to doubt that gravel will make a good concrete, but there is a right and wrong way of using gravel. It is not uncommon to find cement and gravel, just as it is taken from the pit, mixed to form a concrete. Remembering the proper composition of a concrete and placing beside this the fact that gravel usually contains sand, but not in any definite proportions, and that some pockets of "gravel" may be almost completely sand, while in the layers adjoining there may be little if any sand, and that many gravel beds contain much clay or earthy material, it will be readily understood why it is that, in some cases, concrete mixed in this way may be successful, yet it will always be uncertain and hazardous. The only safe method is to separate the stone and sand composing the gravel by screening, then to mix cement, sand and clean stone uniformly and in their right proportions.

A cause of poor cement is the excessive amount of water used when mixing. The tendency very often is to bring concrete to the same consistency as common mortar. Concrete, when ready to be placed in the work, should have the appearance of freshly dug earth. Where an excessive amount of water is used, the hardened concrete will have an open, spongy texture.

The concrete should be mixed at a point convenient to the work, in a box which is sometimes specified as water-tight, but the concrete will quickly make it so. It should be mixed in just such quantity as is required, and a constant stream kept passing to the work. It should be laid in layers, and each layer thoroughly rammed until moisture appears on the surface.

It is very necessary to see that the sand and stone used in making the concrete are clean, that it is free from clay, loam, vegetable or other matter which will act as an adulterant, and result in a weak and friable concrete. If such matter is intermixed with the stone it is well to flush it away with a good stream of water. Large stone used in rubble concrete should be also treated in this way. It is well, particularly in hot weather, to dampen the stone before mixing it with the mortar. The heat of the stone in hot weather causes the moisture of the mortar to evaporate, causes it to set too quickly, and at all times there is more or less absorption from the mortar in immediate contact with the stone, unless the stone, as intimated, has been dampened.

When the work ceases for the day, or is for other reasons interrupted, the surface of concrete should be kept damp until work is resumed. When work is in progress in hot weather, any exposed surfaces should be kept damp and protected from the rays of the sun ; otherwise the surface will, in setting too rapidly, be interlaced with hairlike cracks which, filling with water in winter, and freezing, will cause the surface to scale off. The same scaling sometimes results from laying concrete in frosty weather.

Arch culverts of masonry or concrete fail frequently from settlement caused by an insecure foundation. The foundation should always be of at least sufficient depth to be free from any danger of undermining by the action of the water, and of sufficient further depth to be safe from settlement.

SPECIFICATION FOR CONCRETE ABUTMENT.

Plans. (1) The abutments shall be built in accordance with the dimensions indicated upon the plans and drawings hereunto attached and forming part of these specifications.

"Fine" and "Rubble" Concrete. (2) Concrete referred to in this specification shall be known as "fine concrete" and "rubble concrete." Unless rubble concrete is definitely specified, fine concrete shall be used.

Framework. (3) The abutments are to be erected within a substantial and well constructed framework of well fitted lumber, closely boarded up against the work as it proceeds. Care shall be taken to make a smooth regular surface such that moisture will not find lodgment. The concrete shall be perfectly rammed into place so that all surfaces shall be smooth, without cavities, when the casing is removed. The framework shall not be removed in less than fourteen days from the completion of the work.

Fine Concrete. (4) Fine concrete shall be composed of one part by measure of Portland cement, three parts by measure of sand, and six parts by measure of broken stone. The concrete shall be mixed in a water-tight box or platform placed close to the work, by first spreading evenly a layer of sand ; upon this shall be evenly spread the proportionate quantity of cement, and the two thoroughly mixed in a dry state. To this water shall be added and the whole thoroughly mixed and brought to the consistency of a stiff mortar. The proportionate amount of stone shall then be spread evenly over the mortar, and thoroughly intermixed therewith. The concrete, when mixed as described, shall be immediately put in place and thoroughly pounded and rammed until it is perfectly and uniformly solid, moisture appearing on the surface.

Rubble Concrete. (5) Within the body of the abutments, but not nearer than six inches to the surface in any direction, large stones may be placed by hand in layers. These stones shall be in "rack and pinion" order, and not less than two inches apart. Concrete shall be carefully inserted between the stones thus placed and thoroughly packed and rammed so as to fill all voids. Concrete shall cover each layer of stones to a thickness of half the depth of the stones, when another layer of stones may be placed. A facing of concrete is at all times to be kept at least six inches higher than the rubble concrete ; and shall be united with the rubble concrete so as to form a continuous and solid mass. This outer rim of concrete shall precede the placing of the rubble work within, and shall be placed around the interior of the casing to a height of nine inches and a thickness of six inches. It is to be thoroughly pounded so that no cavities shall remain when the outside casing is removed. In no instance is the rubble concrete to extend higher than one foot below the top of the abutment, which top of the abutment shall be finished with fine concrete.

Cement. (6) All cement employed in the work must be of a favorably known brand of Portland Cement, and approved by the superintendent in charge of the work. It shall be delivered in barrels or equally tight receptacles, and after delivery must be protected from the weather by storing in a tight building or by suitable covering. The packages shall not be laid directly on the ground but shall be placed on boards raised a few inches from it.

Stone Sand and Water. (7) The stone used shall be granite, quartzite, fine-grained limestone or other equally strong and durable stone, care being taken to exclude soft limestone, friable sandstone, and stone affected by the atmosphere. It shall be broken into varying sizes, the largest to pass, any way, through a two-inch ring. The sand used shall be clean, sharp, silicious, and of varying sized grain. The water used shall be clean and care shall be taken not to use an excessive amount, the concrete when mixed and ready for the work to have the consistency of freshly dug earth.

Gravel in Concrete. (8) When gravel is used in making "fine" concrete, it shall be clean, free from clay, loam, or vegetable matter, nor shall it contain stones, any diameter of which exceeds two inches. It shall first be thoroughly mixed in a dry state, with Portland cement, in the proportion of six parts by measure of gravel and one of cement. To this water shall be added and the whole again thoroughly intermixed, the consistency and manner of placing in the work to be in accordance with all portions of this specification applicable thereto.

Where the gravel contains an excessive amount of sand, loam or other objectionable material, it shall be screened to remove all sand and earthy matter ; if necessary it shall be well flushed, the dirty water being allowed to run off. The gravel so treated may then be mixed, instead of broken stone, with sand and cement as prescribed in section four (4) of this specification.

Manner of doing work. (9) While the work is in progress, it shall be so arranged that a steady supply of mixed concrete shall pass from the mixing box to the point where it is to be placed. At any time when the work is interrupted before its completion, or at the end of the day, a wet covering shall be placed over the last layer of concrete ; before the work of depositing the concrete is resumed, this surface shall be thoroughly flushed with water to remove any foreign material which may have gathered thereon. No concrete shall be laid in wet or freezing water.

SNOW ROADS.

The obstruction of roads in winter by snowdrifts is of yearly occurrence in many parts of the Province. Snowdrifts are caused by obstructions to the drifting snow, close to the ground, where the winds are sweeping it along.

Fences along roadways should either be entirely open or very high and close. The intermediate stage, found in the rail fence, offers an obstruction to the wind, but permits the drifting snow to pass through, subside, and pile up on the sheltered side of the fence. This is one of the most common causes of blockades. High board fences have been built by railway companies at certain points to prevent drifting, and have proven very effective, but the cost is prohibitive for ordinary highways. The drifting snow is close to the ground, and such fences obstruct the velocity and change the current of the wind, causing the snow to fall beside the fence, before passing over into the roadway.

Open wire fences along the roads have been encouraged by many municipalities, the council frequently providing the wire or giving a bonus of from 25 cents to 40 cents a rod. Wire fences prevent the snow from accumulating so as to form banks and pitch holes, and make a decided improvement, but are not a complete preventative. The uninterrupted current of the wind constantly moves the loose snow into the beaten sleigh track, making travel heavy, and gradually raising the centre of the road to such a height as to make it difficult for loaded sleighs to pass one another.

Where the forest covers the ground, the winds have not sufficient strength to carry the snow, so that it lies evenly and with a uniform depth. The completeness with which the country is being stripped of trees is largely responsible for the blocked condition of our roads in winter.

Tree planting can be done so as to break the current of the wind, and to prevent the sweep across wide clearings in which it gathers a large amount of snow; not trees along the roadway only, but also along the division fences on the farms to interrupt the velocity of the wind before it reaches the roadway. Observation will show, wherever the plan had been adopted, or where orchards, groves or hedges exist near the road on the side from which the prevailing winds blow, that banking occurs to a much less extent. Hedges of cedar, spruce or other evergreen, in place of fences along the road, are a complete preventative.

Snow roads are kept open under the statute labor system by pathmasters. Under a system of commutation, or where statute labor is abolished the council may continue to appoint men as pathmasters for this purpose alone, the men employed to be paid in cash by the council at a fixed rate per day. If preferred, it may be left to the road-overseer for each road division to arrange with suitable men to take charge of keeping snow roads open, but when appointed by the council they are required to act as in the case of any other municipal office.

COLONIZATION ROADS.

In the early history of this Province the building of wagon roads was looked upon as being one of the most important problems with which the early settlers had to deal. The land being entirely covered with heavy, deep-rooted timber, the task of clearing, stumping, grading and draining was a very difficult one. This encouraged early settlement along the margins of lakes and streams, where access to markets and mills could be had by water. The land along these streams was not always the most desirable, or was quickly occupied, and soon the settlers ventured to explore farther back, with special regard to the future value of their location. While the settlement was scattered for many years, these men endured all difficulties and privations in their efforts to establish homes and to improve their possessions.

Much of the travel was by canoe, when in the direction of streams, and often by the more difficult land route across the country, where the trail or the blazed line was the only road, and where personal strength was the only means of conveyance. History

records many instances of long travel, carrying heavy burdens of grist to mill, or simple articles of food and apparel for the family. The duty of building roads was realized to be a difficult and trying one, requiring years of honest toil to accomplish, yet they faced it manfully in addition to all the other duties of early settlement, and with little or no assistance, so that we marvel at what has been accomplished in one brief century.

Municipal appropriations and Government aid were not available in those days, and nothing but the strength and application of man could be resorted to. Thanks to the efforts of these pioneers and their successors, the forests have been driven back, the lands have been brought into successful cultivation, roads have been formed, and much done to make them good through what is known as the older part of Ontario.

Not satisfied, however, with the development of one portion of the country, efforts are now being put forth to colonize what may fairly be looked upon as the larger, and in many respects the wealthier portion. With immense areas of rich agricultural soil, well timbered and watered, with an excellent climate, no good reason can be offered for not opening it up to receive the surplus population of the older settlements, rather than to have them drift to other Provinces and other countries. Much has been done to attract the attention of settlers to this new section of Ontario, and some localities are now fast filling up.

Building a Colonization Road in New Ontario.

There are, scattered through each of these communities, what may be justly called pioneer settlers, who for years have been trying to attract their fellows, and these have experienced many of the troubles of early settlement. But by those who are now pouring into New Ontario very little of the genuine pioneer life is experienced. Where it is desirable that a section should be opened up, it is the duty of the Government to do all in its power to remove obstacles from the way of the settlers, so that they may devote their time and energy to clearing the land. The more rapidly this is done, the more quickly will these hidden treasures be cultivated for the benefit of the whole Province.

For the older part of the Province, much has been done by moneys realized from the lakes, forests and mines of New Ontario, and it is only just that a fair proportion of the revenue of that section should be used in aid of its substantial development. Opportunities are now provided for doing this more easily, cheaply and perfectly than before, and for this reason much of the attention of the Provincial Road Department is being turned to the important matter of building proper colonization roads.

A careful examination of the whole section is first made, comprehensive plans are laid down for securing lines that will best accommodate communities for the future as

well as the present. Due regard is being paid to location so as to secure the straightest and shortest lines, at the same time having due regard to grades, hills, and easy crossing of streams. A study of the experience of the older townships is of the greatest benefit in the framing of such a plan.

The ruling principle of older Ontario seemed to be to follow, as nearly as possible, the fixed lines of survey, regardless of hills, grades or crossings. The result has been that much extra cost is involved in building expensive bridges and keeping up troublesome hills, in addition to the constant annoyance and loss of energy in hauling loads over difficult grades. These might have been removed by slight deviations from the straight line, with little, if any, difference in length.

The new system provides for clearing the road the width of the allowance, and forming the roadbed, in however elementary a way, so as to provide a uniform width of grade, as far as possible making the width in accordance with the demands of travel. Thorough and systematic drainage is being resorted to, and strict attention is given to the building of drains sufficient to carry the water to outlets in the adjoining land.

The excavated earth is used in forming the roadway, and no more corduroy is used than is indispensable. The drainage of the road and the making of top drains, in addition to securing a firm foundation, relieves the land of surface water and provides outlets for the drainage of the settler's first clearing. The value of this is fully appreciated by all who are enjoying its benefits.

Modern machinery for doing this work easily and quickly is being adopted wherever practicable, and as fast as means will permit, new roads are being opened, with the result that settlement in New Ontario cannot be styled pioneer life, as compared with the first occupation of older Ontario.

WIDE TIRES.

To make roads and repair them is not all. To relieve the roads of unnecessary wear is equally important. In this connection "wide tires" are a first consideration.

Vehicles for carrying loads of a ton or more should have tires at least four, or, better, five inches wide. With expensively built stone roads the ruts made by narrow tires may be so repaired as to keep the road in a fairly good condition though at increased cost. But broad tires are particularly necessary on roads such as are commonly constructed in this country. Narrow wagon tires are the greatest destroyers of such gravel and broken stone roads as are built and maintained in Ontario. Even with traffic which is not excessive, our country roads will not be kept in a moderately good condition so long as they are subjected to the strain placed upon them by narrow-tired waggons. There are two aspects of the question of tire widths to be considered. (1) The relation of the tire to the amount of horse power needed to move the load; (2) The effect of different widths of tires on the roads.

Traction.

With respect to the first of these, the tractive force required, the effect of the width of tires varies with the condition of the roads. On a smooth, hard, unyielding pavement there is practically no difference, except that the broader base takes the firmer hold of the road, and the wheel revolves more easily and perfectly.

With soft roads, deep with semi-liquid mud, the advantage is slightly in favor of the narrow tire, since the wide face has a tendency to carry the mud with it. It is with the intermediate stage, such as exists on a good gravel or dirt country road, that the chief benefit arises. Through such surfaces narrow tires cut, and the load is, in effect, being constantly drawn up hill; but broad tires roll smoothly along the top. A wagon having tires wide enough to keep the wheels from cutting into the road will plainly draw more easily than one which plows through the mud instead of running

over it. Experiments have shown that the loads which, on narrow tires, sink to the axles, can be drawn without difficulty when broad tires are used. It is admittedly the case that wide tires are an advantage on farms, but there appears to be a hesitancy as to their use on the roads.

It is urged against wide tires that they do not roll freely in the ruts made by narrow tires. So long as narrow tires are commonly used this will be the case to some extent; but, on the other hand, if wide tires were generally used the ruts would not exist. In any case, with narrow tires the bottom of the ruts made by the narrow tires are uneven, and the narrow rims are constantly grinding against the sides of the ruts, creating the greatest friction, so that the objectionable difference is not so great as it appears on first sight, if it exists at all.

It is further contended that the wide tires come in contact with more loose stones than do those with a narrow tread. The greater resistance offered in this way is more than counterbalanced, however, by the loose stones dropping into the narrow ruts. In the one case the wheel goes to the stone, in the other the stone gets in front of the wheel. The irregular bottom of the ruts, and the stones in the narrow ruts keep up a constant vibration of the wagon, which transmits a swinging motion to the tongue, galling and annoying the horses, and destructive to conveyances.

Benefits to Roads.

Broad tires actually improve a road by rolling it down hard, and leaving it smooth, so that water runs off without doing injury. Narrow tires cut and grind, burst and plow their way into the road, leaving ruts and holes to catch and hold water. The difference between the two is on a par with the difference between a pick and a pounder. The one tears up, the other consolidates.

The narrow tire is a rut producer. With a load of 2,000 pounds each wheel must support 500 pounds. Thus a narrow straight line, the width of the tire, must support 500 pounds. With macadam, gravel and dirt roads the narrow tires commonly used must have a greater bearing, and so, the width of the tire being fixed, the wheel sinks into the road so as to extend the bearing along its circumference. In this manner the rut is commenced. Other narrow wheels follow, deepending the rut and loosening the earth around it. After a rain, water lies in the hollow to assist the work of destruction.

Broad tires, on the contrary, are a benefit rather than a detriment to the road. They do very largely the work of a roller. Instead of a bearing of one and a half or two inches, the width of a narrow tire, this is increased to four, five or more inches. The advantage is at once apparent. The broad tires do not sink at all so deeply into the road as do the narrow, but distribute their weight across the road as well as lengthways. Their broad bases do not slip from protuberances so readily, and the consequent jolting is avoided. They do not push loose stones before them, tearing up the road, as do narrow tires, but pass over them, pressing them into the road. Grinding, upheaving and fracturing do not take place as with narrow tires, the road is compacted and compressed, and rendered thereby less pervious to moisture. This means that at all times the road is better, while the cost of maintenance is very greatly reduced. Were the benefit of broad tires better understood in Ontario our unimproved roads would be very much less cut up, and improved roads would be more cheaply kept in repair.

In descending hills with heavy loads, it is a frequent practice with teamsters to lock one or more wheels. It is evident that the injury to the road, which is very great in any case, is much increased when the load is suported by cutting tires. Hills, even under ordinary traffic, are expensive to maintain, and the width of the tire used with locked wheels becomes a very important consideration. In nearly every part of the Province this is the case to some extent. But there are districts where hills, many of them steep, are of constant occurrence. In such localities the practice of locking wheels is very common, and the necessity for wide tires is of the utmost consequence.

Wide Tire Laws.

While a width of four or five inches is very satisfactory on farm wagons, the drays and tonnage wagons used for the transportation of excessively heavy freight in towns could reasonably be twice this. England and all the progressive European countries have laws regulating the width of tires according to the load vehicles are designed to draw. Sometimes the width is regulated by the size of the axle. In France, a country which presents some of our most perfect models in road making, tires on market wagons range from three to ten inches, the majority being from four to six. The gauge of the wheels is sometimes set so that the track of the front wheels comes inside the tracks of the rear wheels. In New York State the turnpike law grants reduced rates of toll to vehicles with broad tires. The Michigan road law provides that users of wide tires are entitled to a rebate of half their road tax.

Obviously the use of wide tires cannot be made immediately compulsory, without working injustice. Provision could be made, however, that a by-law regulating the matter would come into force after a term of years; fair warning would thereby be given and little inconvenience would be felt; before the time for enforcing the by-law arrived the use of wide tires would, in anticipation, have gradually become more common. The beneficial effect of wider tires would then be apparent to all, and public opinion would demand and sustain the enactment. The people are competent to judge in this matter, as in others affecting personal and public interests. The great reason that wide tires are not now used is that the public have not had an opportunity to judge of their merits in a practical manner. Further, the users of the road have in the past looked at the matter of draught only. They prefer wide tires on the farms because the fields and lanes are not cut up by them. The roads, however, have been regarded as public property, and the users have not felt a personal interest in their condition.

ELECTRIC RAILWAYS.

The use of highways by electric railways is creating new problems with regard to the maintenance of roads. The number of charters now being sought indicates that this use of the highway will increase very largely in the near future. This means of travel and transportation is beneficial to the district through which the railway passes, especially the property immediately adjacent to the line of railway. In fruit districts the advantage is marked, in that perishable and tender products can be conveyed to the market with rapidity and careful handling. In other respects the advantages of the town, through this convenient means of transportation, become a part of country life; so much so, that suburban residences of business men are found considerable distances from the town, wherever electric railways exist. With these advantages come certain disadvantages and there are details connected with the maintenance of highways upon which electric railways have been constructed that require the attention of municipalities.

Location.

The natural location for an electric railway would appear to be, in most cases, along the public highways. Here it is most convenient for the public using the cars, and the railway companies naturally benefit by the greater amount of traffic which thereby arises. One of the chief merits of the electric railway is that it passes close to one's door, and that the cars can be stopped at any point to let passengers on and off. From this occupation of the common road by electric cars the principal difficulties arise.

When these railways, as is commonly the case, are laid on the graded and travelled portion of the highway, the width of roadway for ordinary traffic is confined to a narrow strip. Surface drainage, from the road to the side drain, is interrupted by the railway track, and the expense of maintaining the road is increased.

During the time of snow roads, when the roads are drifted and the snow is deep, the snow thrown from the railway track by the snow plow is piled high on the sleigh road and difficulties are experienced, varying with the nature of the snow drifts. Where wire fences exist the tendency at all times is for the sleigh road to pile up to an inconvenient height. When, along side this, the snow from the railway track has been plowed out, down to the surface of the rails, the sleigh road is left in a dangerous condition.

The rails in the roadway, the poles and wiring at times cause a certain obstruction to the free use of the highway, from which accidents occur. An element of danger arises from the frightening of horses by electric cars, interfering much with the ordinary use of the highway.

In some cases, as road improvement progresses, the grade of the road may have to be altered, necessitating the raising or lowering of the railway tracks. Openings may be needed under the track for culverts or drainage.

All of these are details which are more or less affected by the location of the tracks. As has been pointed out, the roadway offers mutual advantages both to the company and to the public. Moreover, property owners would, as a rule, object to placing the railway to the rear of their residences, across the farms, thereby cutting up the fields.

It has been suggested that the railway companies could purchase a narrow strip in front of the farms and adjacent to the highway, so that the present fences might be moved back the necessary distance, the railway thereby being on its own right of way. By this means certain difficulties are lessened if not removed. The maintenance of the common road is not interfered with. Responsibility for accident is definitely removed from the municipality, danger of accident is lessened, and the ordinary use of the highway is less interrupted. On the other hand, the sale of such a strip from the farms changes their boundaries, to which there might be a feeling of opposition, while the control of the road would be less definitely within the jurisdiction of the municipality.

The roadside, between the open ditch and the fence is in many cases the location best adapted to all interests.

Scope of Agreements.

Local circumstances will in all cases suggest the scope to be covered in regulating the use of highways by electric railways. In general, the roads which may be occupied should be specified.

The location of the tracks on the highway should be distinctly specified, as a rule, by stating the distance the inner rail shall be placed from the centre of the road allowance. The placing of switches or turnouts, the laying of tracks across the road, the obstruction of the road in construction or in making repairs, should be regulated.

The company should make provision for private crossings, present and future, so that property owners may have free access to their land.

The class of construction to be adopted should be specified, the weight and kind of rail to be used, etc.

The company should construct and operate the railway so as not to interfere with ditches or watercourses, nor prevent their future construction under the Ditches and Watercourses Act, or by the municipality. In certain cases the cost of the necessary work under the track should be borne by the company.

A company will frequently select the side of a road least subject to interruption by snow drifts. Provision should be made for the removal of snow and ice from the railway tracks, and for the method of disposing of it.

The maintenance of the roadway between the company's tracks, and adjacent to them should be considered.

The erection of poles, wiring, etc., should be within the control of the municipality,

and accidents therefrom, as obstructions to the highway, should be definitely assumed by the company.

The municipality should be relieved from responsibility for accident of all kinds arising from the construction of the railways and the operation of cars thereon.

Provision should be made for the strengthening, construction and maintenance of new culverts and bridges.

Provision should be made for opening the roadway when necessary under and adjacent to the track, by the municipality, by a property owner, and by the company.

Agreements between electric railway companies and municipalities should be made as perfect as possible. All possible contingencies should be provided for by the municipality. Good judgment is needed in discriminating between what is necessary to safeguard present and future public interests, and that which may reasonably be omitted, as an unnecessary restriction. Much care should be exercised in drawing up these documents to see that all essential conditions are clearly and fully covered. In dealing with these matters the experience of other municipalities should be sought.

PURCHASE OF ROAD MACHINERY.

Section 637 of the Municipal Act, by the Municipal Amendment Act, 1902, was amended by adding the following paragraphs, after paragraph number 10, providing that county, township, city, town and village councils may pass by-laws:

10a. For contracting for the purchase, conditionally or otherwise, or for the rental for a term of years, or otherwise, of roadmaking machinery and appliances for public uses within the municipality, and such contract may provide that payment for such roadmaking machinery and appliances may be made in instalments extending over a period not exceeding five years.

10b. For issuing debentures payable in not more than five years from the date of issue and for applying the proceeds of such debentures to paying for such roadmaking machinery and appliances, and it shall not be necessary to obtain the assent of the electors to any such by-law.

AN ACT TO AMEND THE TOLL ROADS EXPROPRIATION ACT, 1901.

Assented to March 17th, 1902.

His Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

1. Sections 3, 4 and 5 of the Toll Roads Expropriation Act, 1901, are repealed and the following substituted therefor:

Where road lies wholly in one township or in two or more municipalities in the same county.

3.—(1) In the case of any toll road lying wholly within one township the municipal council of such township, and in the case of any such road lying wholly within one or more municipalities of the same county the municipal council of such county may agree with the owners of any such road as to the amount to be paid in order that the tolls on such road may be abolished, and, in the event of their failing so to agree, the same may at the instance of the municipal council of the township or county, as the case may be, be determined by arbitration as hereinafter provided, and if thereto required by a petition signed by fifty ratepayers the municipal council shall within three months take the necessary proceedings for that purpose and pass a by-law appointing an arbitrator.

Appointment of arbitrator.

(2) On the appointment of an arbitrator, as hereinbefore mentioned, either by a township or by a county, the clerk of the township or of the county, as the case may be, shall notify the owners of the road of such ap-

pointment. On the receipt of such notice the owners of such road may appoint an arbitrator, and in default of their doing so within 21 days of the receipt of such notice, the Judge of the County Court shall appoint an arbitrator to act in their behalf. The two arbitrators so appointed shall, within fourteen days of the appointment of the last person appointed, meet and appoint a third arbitrator, and in default of their doing so from any cause then the Judge of the County Court shall ex-officio act as a third arbitrator, unless before the expiration of such fourteen days' notice in writing be given by the municipality or the owner to one or both of the two arbitrators requiring that in default of their agreeing on a third arbitrator some person other than the Judge of the County Court shall be the third arbitrator, in which case such appointment shall be made by the President of one of the divisions of the High Court of Justice on the application of either party on seven days' notice to the other.

Where road lies partly within a city or separated town or in another county.

4.—(1) The municipal council of any county (herein called the initiating county) may also in the case of any toll road where it lies partly in one or more municipalities of such county and partly in a city or separated town, or where it lies partly in one or more municipalities of such county and partly in one or more municipalities of another county, with the consent of the municipal council of the other county, or the city or town, as the case may be, agree with the owners or lessees of any such road as to the amount to be paid in order that the tolls on such road may be abolished, and may also agree with such other county or such city or town, as the case may be, on the proportions in which the amount shall be contributed by them respectively, and in the event of failure to agree on such amount the same, as well as the proportions of contribution, may, at the instance of the municipal council of the initiating county, be determined by arbitration as herein provided.

Appointment of arbitrators.

(2) In case of any such arbitration the municipal council of the initiating county shall appoint by by-law some member of the council or some officer thereof to act on their behalf in the appointment of an arbitrator on behalf of the municipalities, and a copy of such by-law shall be served on the clerk of the other county or city or town, as the case may be, and such other municipality shall within twenty-one days thereafter, by by-law, appoint some member of the council or some officer thereof to act on their behalf in the appointment of such arbitrator, and cause a copy of the by-law to be served on the clerk of the initiating county.

If such two persons, within seven days thereafter, agree and appoint an arbitrator by writing signed by them, he shall be the arbitrator on behalf of both municipalities, and in default of their agreement within that time or in default of such other municipality within said twenty-one days appointing a person to act in their behalf, the Judge of the county court of the initiating county shall appoint an arbitrator to act on behalf of the two municipalities, and the clerk of the initiating county shall notify the owners of the road of the appointment, whether by agreement or by the judge. On the receipt of such notice, the owners of such road may appoint an arbitrator, and in default of their doing so within twenty-one days of the receipt of such notice the Judge of the county court of the initiating county shall appoint an arbitrator to act in their behalf. The two arbitrators so appointed shall, within fourteen days of the appointment of the last person appointed, meet and appoint a third arbitrator, and in default of their doing so from any cause, then the judge of the county court shall, ex-officio, act as a third arbitrator, unless before the expiration of such fourteen days' notice in writing be given by the municipality to one or both of the two arbitrators, requiring that in default of their agreeing on a third arbitrator some person other than the judge of the county court shall be the third arbitrator, in which case such appointment shall be made by the President of one of the divisions of the High Court of Justice on the application of either party on seven days' notice to the other.

Award to determine proportions in which municipalities to contribute.

(3) The three arbitrators so appointed, or a majority of them, shall determine and award the amount to be paid to the owners, and shall determine and award the proportions in which such amount is to be contributed by them respectively.

Agreement upon sole arbitrator.

5. In any case falling under sections 3 and 4 the municipality or municipalities, and the owners of the road may agree together that the judge of the county court of the initiating county, or any other person agreed on, may be the sole arbitrator, or any other person agreed on, may be the sole arbitrator, and the provisions of this Act shall apply in such case, and such sole arbitrator shall, in any case coming under subsections 3 of section 4, determine

and award the proportions of contribution.

1 Edw. VII., c. 33, s. 9, repealed.

2. Section 9 of the said Act is repealed and the following section substituted therefor :—

Borrowing amount necessary to free roads.

9. After the award has become absolute or settled on appeal, or after an agreement has been arrived at between the municipality or municipalities as the case may be, and the owners of any road as to the amount to be paid in order that tolls on any such roads may be abolished, the municipal council of any municipality may, in the manner provided for in the Municipal Act, without submitting the same for the assent of the electors, pass a by-law for borrowing the amount required to be paid by such municipality to purchase the said roads, in accordance with the award of the arbitrators or arbitrator or the agreement made as aforesaid, by the issue of debentures of the municipality payable in not more than thirty years. A county council may provide by such by-law for raising any amount required to pay, and may pay to any municipality or municipalities which are not materially or are only slightly benefited by the purchase of the road or roads such a sum by way of bonus, as may be deemed a fair or partial equivalent for the amount which any such municipality will be required to pay towards the said purchase, or any part thereof.

1 Edw. VII., c. 33, s. 10, amended.

3. Section 10 of the said Act is amended by inserting the following words after the word "liable" in the sixteenth line :—"Such by-law shall provide for assessing and levying upon all the ratable property in such respective municipalities or portions of municipalities, the annual sums necessary to meet the debentures and the interest thereon as the same fall due, and, if necessary, to form a sinking fund for that purpose, and may be passed by the county council without submitting the same for the assent of the electors."

Provisions in by-law for special rates.

1 Edw. VII., c. 33, s. 8, ss. 8, amended.

4. Subsection 8 of section 8 of the said Act is amended by adding thereto the following :—

When municipality must elect to take road or abandon purchase.

In any case falling under section 4 the road shall be taken and the amount agreed on or awarded shall be paid within one year as aforesad unless both municipalities elect that the road shall not be taken and so notify the owner and in that case the costs to which the owner has been put shall be paid by by the municipalities in equal shares.

1 Edw. VII., c. 33, s. 14, amended.

5. Section 14 of the said Act is amended by inserting the words "two next" before the word "preceding" in the second line.

1 Edw. VII., c. 33, s. 15, repealed.

6. Section 15 of the said Act is repealed and the following substituted therefor :—

Removal of tolls in cities or towns on purchase by county.

15. On the completion of the purchase of the roads by any county and upon the removal of tolls therefrom, all tolls shall be removed from the portions of such roads lying within the limits of any city or town.

Upon the removal by the county of the tolls from any road under this Act, such road so far as it lies within the county shall thenceforward be a county road within the meaning and provisions of the Municipal Act.

1 Edw. VII., c. 33, s. 2, ss. 1, repealed.

7.—(1) Subsection 1 of section 2 of the Toll Roads Expropriation Act, 1901, is repealed and the following substituted therefor :—

(1) "Owner" or "owners" shall include any person or persons, joint stock company or municipality having any legal, equitable or leasehold estate or interest in a road.

S. 8, ss. 6, amended.

(2) Subsection 6 of section 8 of the said Act is amended by striking out the words "proprietor or proprietors" in the said subsection and inserting in lieu thereof the words "owner or owners."

S. 8, ss. 9, amended.

(3) Subsection 9 of section 8 of the said Act is amended by striking out the words "preceding section" and inserting in lieu thereof the words "next preceding section."

ANNUAL REPORT

OF THE

BUREAU OF INDUSTRIES

FOR THE

PROVINCE OF ONTARIO

1901.

PART I.—AGRICULTURAL STATISTICS.

PART II.—CHATTEL MORTGAGES

(PUBLISHED BY THE ONTARIO DEPARTMENT OF AGRICULTURE, TORONTO.)

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ONTARIO BUREAU OF INDUSTRIES.

PART I.—AGRICULTURAL STATISTICS.

THE WEATHER.

The success of a crop depends upon the suitability of the plant to its environment, the quality of the seed, the nature of the soil, and the system of tillage practised; also upon the weather conditions prevailing during the period of growth. The records of temperature, rainfall, snowfall, and sunshine in the Province for a series of years are, therefore, full of interest and instruction to those who would study the agricultural conditions of the country.

Temperature. The following table gives the average temperature of the Province by months, and for the six months April-September inclusive—practically the growing season—for the past ten years, and also the average for the twenty years 1882-1901:

Month.	1901.	1900.	1899.	1898.	1897.	1896.	1895.	1894.	1893.	1892.	1882-1901.
	°	°	°	°	°	°	°	°	°	°	°
January	19.0	21.9	18.7	20.2	19 5	18.4	17.3	23 1	10.3	17.0	17.7
February	13.0	17.1	15.2	22.0	21.8	19.2	14.5	16.9	14.7	21 9	17.9
March	26.9	20 5	25.8	35 6	29.0	21.2	21.5	34.9	26.4	25.2	25.4
April	45.0	44.8	44 5	42.1	42.7	46.3	43.3	44.3	38.7	40.3	41.8
May	54 6	54 6	55 7	55 5	52.9	60 1	56.9	53 7	52 2	52 2	53.7
June	65 8	64.1	64.8	65.6	60 9	64.8	68.0	66.1	67.6	65.4	64.3
July	71.9	68.2	67.5	70.2	71.9	68.8	65.5	69.1	68.3	68 3	67.9
August	67.5	70 9	68 5	67.7	64.2	67.2	65.3	64.0	66.1	66 6	65 9
September	60.1	62.3	56.2	61 8	60.8	56.8	60.5	61.1	56.0	58.8	58 6
October	48.5	55.2	50.0	48.7	50.1	43.4	41.4	48.8	48.2	46.6	46.7
November	31.9	35.3	38 0	34 9	34.9	37.8	34.5	31.6	35.1	33.1	34.8
December	22.7	24.7	25.1	22 8	24.6	24.1	25 8	27 7	20.7	21.8	24 2
Annual mean	43.9	45 0	44.2	45.6	44.4	44.0	42.9	45 1	42 0	43.1	43.2
Mean for six months, April to September	60.8	60 8	59.5	60.5	58.9	60.7	59.9	59.7	58 2	58 6	58 7

The mean annual temperature was 43.9°, or 1.1° below that of 1900, and .7° above that of the twenty years 1882-1901. The mean for the six months April-September was 60.8°, or exactly the same as that of the preceding year, although 2.1° above that of the twenty years period. February, November, and December were the only months which showed a relatively low range of temperature, the other nine months going more or less over their respective averages. The mean temperature for July was 71.9°, or 4° above its average for the twenty years. This high average temperature, while equalled by that of July in 1897, has never been reached by any other month in the years comprising the table. April also showed an unusually high increase in temperature compared with its average for the twenty years.

Precipitation. The fall of rain and snow in the winter months is given in the following table for ten years, together with an average for the twenty years 1882-1901. An inch of rain is the equivalent of ten inches of snow :

Year.	November.		December.		January.		February.		March.		Total for five months	
	Rain.	Snow.	Rain.	Snow.	Rain.	Snow.	Rain.	Snow.	Rain.	Snow.	Rain.	Snow.
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in	in.
1901	2 99	10.4	0 51	8.6	0 58	18 8	R	17 6	1.60	13.1	5.68	68 5
1900	1.13	1.0	2 15	14.5	0.72	15 8	1.68	26.8	0.53	18.8	6 21	76.9
1899	1.67	9 6	0.74	24.6	1.50	13 2	0.76	8.0	1 78	22.1	6 45	77.5
1898	3.40	8.9	1.73	17.5	1.47	18.2	0.60	18 9	2.42	1 0	9.62	64.5
1897	2.51	6.2	0.37	9.6	1 15	17 3	0.89	14 1	1 52	12 7	6.44	59 9
1896	2 47	7.7	2.22	13.2	0 65	17.1	0.46	24 5	0 74	11 4	6.54	73.9
1895	0.78	11.4	1.49	6 6	0.77	31.3	0 08	12 0	0.41	10.8	3.53	72.1
1894	1.97	9.9	1 85	26.2	0.91	14.0	0 59	15 1	1 15	4.8	6.47	70.0
1893	2.09	10 8	0.68	11 6	0.43	25.5	0.73	24 3	1.19	5.4	5.12	77.6
1892	3.91	7.4	1 84	6.4	0.44	21 7	0 66	16.7	0.50	7 7	7 35	59.9
1882-1901	2.17	8.5	1 31	15.0	1 03	20 2	0 91	16 8	1.10	11 9	6 52	72.4

The rainfall of the Province for the five months averaged 5.68 inches, or .84 inch less than the average for 1882-1901, and the snowfall was 68.5 inches, or 3.9 inches less than the average. The most striking feature of the table is that during the three consecutive months December, January, and February the rainfall was only about one-third that of the normal, being but 1.09 inch as compared with an average of 3.25 inches for the twenty years. While December experienced the lightest snowfall since 1895, practically all the precipitation of February was snow.

The growing season for most crops, however, is limited to the six months April-September, and the following table shows the rainfall for the past ten years, and also the averages for the twenty years 1882-1901 :

Months	1901	1900	1899	1898	1897	1896	1895	1894	1893	1892	1882-1901
	in.	in.	in.	in	in.	in.	in.	in.	in.	in.	in.
April	2.26	1.44	1.10	1.45	2.52	1.26	1.49	0.99	2.61	1.15	1 56
May	3.67	2 03	3.43	2 43	3.38	2.10	2 36	5 72	3.35	3 64	2.88
June	2.14	2 83	2.46	2.83	2.83	2.39	1.37	2.32	3.15	4.54	2.77
July	3.90	3.96	2.78	1.11	5.36	2 79	2 02	1 72	2.44	2.73	2.69
August	2 78	2.15	0 81	2 64	2 62	2.86	2.81	0.84	2 67	4 26	2.52
September	2 78	2 73	3.72	2 94	0 83	4 47	2.67	3 73	1.94	3.84	2 63
Total for six months	17.53	15.14	14 30	13.40	17.54	15 87	12 72	15.32	16.16	20.16	15.05

The total precipitation for the six months was 17.53 inches, which was 2.38 inches more than the average for the twenty years. June is the only month in the table showing a decrease

in rainfall compared with its own average. June is also credited with the least rainfall for the year, although April is by far the driest month of the six for the twenty years.

Sunshine. In the following table the averages of sunshine are, as usual, derived from the records of the weather stations at Woodstock, Toronto, Barrie, Lindsay and Kingston.

Months.	Sun above horizon.	1901	1900	1899	1898	1897	1396	1895	1894	1893	1892	1882-1901
	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs	hrs.	hrs.	hrs.	hrs.
January	285.7	59.7	77 1	90 8	76.2	70.4	52 3	73.0	74.5	64.0	72.8	68 7
February	291.4	115.7	109.8	112 8	69 3	93.7	104.0	110.2	124.2	93.8	93 6	94 9
March	369.9	96.9	161.4	133.2	157.5	148 3	188.1	179.6	127.5	150 4	174.9	148.7
April	406.4	154 5	214.0	223.2	230 2	174.2	180 3	195.1	212.9	148.5	215.2	193.0
May	461.1	177.3	247 9	210.9	196.3	196 9	262.1	252.1	181.7	211.1	165.4	211.9
June	465 7	265.5	305 3	278 2	237.1	219.8	302.1	286.3	244.6	247.8	201.4	252.8
July	470 9	268.2	266.3	302.2	307.8	258.7	237.8	232.4	276.2	284.2	315.1	272.6
August	434.5	203.0	271.4	262.1	225.2	262.4	262.6	228.0	207.3	259.0	231.6	240.8
September	376.3	199.7	190.0	164.4	202.4	237.1	168.0	194 2	156 4	177.8	218.2	193.4
October	340.2	163.0	164 0	141.7	118.2	161.0	135.5	149.0	129.4	150 0	145.6	134.8
November	236.9	80 3	82.4	78.6	89 0	60 8	69.8	79 3	64.7	81.3	35.1	68.1
December	274 3	62.9	46.6	60.2	56.6	40.6	80.8	57.1	65.5	55.8	56.6	56.8
Total for the year	4463.3	1852 7	2136 2	2058 3	1965.8	1923.9	2043 4	2036.3	1864.9	1921 7	1925.5	1936.5
Total for 6 months April-Sept.	2614 9	1274.2	1494 9	1441.0	1599.0	1349 1	1412.9	1388.1	1279 1	1376.4	1346 9	1364 5

There were only 1852.7 hours of sunshine registered in 1901, or 283.5 hours less than in the preceding year, which was one of unusual brightness, and 83.8 hours less than the average for 1882-1901. The sunshine for the six growing months April-September amounted to 1274.2 hours, or 90.3 hours less than the average for the twenty years, and 220.7 hours less than were registered in 1900. The harvest months of July and August did not equal their averages.

VEGETATION.

Correspondents who wrote a few days before the 1st of May considered the season as rather backward, but those who sent in their reports after that date spoke of rapid growth in both field and forest, which had brought vegetation rather more forward than usual. The eastern portion of the Province appeared to have been relatively more advanced in this respect than the west. Meadows in the beginning of May afforded excellent pasturage for sheep, and a fair bite for other live stock. An Essex correspondent writing on May 6th, stated that peach trees were then in profuse bloom.

Spring Seeding. Taking the Province over, spring sowing may be described as being about half done on the first of May, although in a few localities it was claimed that the work was practically completed by that time. Early sown grains found an excellent seed-bed, more especially on high and well drained lands; but a heavy snow and rain storm, ranging from the 19th to the 21st of April, gave spring operations a decided set back by flooding low-lying places, and not only preventing further sowing for a week or so, but in some instances drowning out a portion of the crop already put in. Notwithstanding this drawback, the prospects for spring

crops were on the whole encouraging on May 1st. A few correspondents reported potatoes a having been planted, which was somewhat earlier than usual for that crop.

THE GRAIN CROPS.

Fall Wheat. The reports regarding the newly planted fall wheat were thus summarized in the bulletin issued in November, 1900: "Correspondents in the fall wheat counties of the western part of the Province are divided as to the area of new wheat compared with last year, although it is probable that decreases and increases will about balance themselves, and give an average acreage. In the eastern part of the Province there is a decided gain in the area grown. The period of sowing ranged from the last week of August to the third week of October, the bulk of the crop being put in about the middle of September. While some complain of a dry seed bed, the majority of reports speak of a good catch, and in a number of instances the growth has been so rank that cattle have had to be turned into the fields to eat off the tops of the plants. In the western half of the Province the Hessian fly has been attacking the new wheat, but in the counties east of York little or no mention is made of this pest. Over forty different sorts of fall wheat are mentioned as growing, the favorite varieties being Dawson's Golden Chaff, Clawson, and Genesee Giant."

In the Annual Report of the Agricultural College for 1900, Prof. W. Lochhead thus referred to the visitation of the Hessian fly: "Many complaints reach us regarding the prevalence of the Hessian fly, and observations show that it is prevalent in all the counties along Lake Erie, viz.: Essex, Kent, Elgin, Norfolk, Haldimand, Welland, and Lincoln. The wheat crop of Middlesex, Lambton, Huron, Oxford and Brant have also been badly attacked, and occasional complaints have come from Perth and Simcoe, Bruce, Grey, Wellington, Waterloo, Dufferin, but the counties east of Toronto are practically free. The long open falls of the past two years have been very favorable to the breeding of Hessian flies. Reports of the dates of sowing of the fall wheat in the infected districts make it quite clear that the time of the sowing of the seed should be postponed till the last week in September. Where such late sowing has been done the crop has escaped the fly. It is often maintained that seed sown after the first week in September does not produce a yield equal to that produced from seed sown prior to that date; but, on the other hand, it does not take many Hessian flies to make a material reduction in the yield of an infested field."

But for the injury done by the Hessian fly in the southwestern part of the Province, fall wheat could be classed as a most promising crop in May. Unfortunately every county south of a line drawn from Hamilton to Sarnia had suffered considerably from the fly, and a few townships a little to the north had also been visited by the pest. Some fields had to be plowed up on that account, but not so large an acreage as the poor condition of the wheat would warrant, on account of the grain having been "seeded down" with grass. Outside the counties affected by the Hessian fly, fall wheat was then looking well. Some injury was done by ice on low-lying or poorly drained lands, but as a rule the crop presented a luxuriant appearance—the growth having been almost too rank in places in the fall—and several counties were expected to give yields well up to the record.

The August bulletin contained the following: "Returns just to hand show that the injury done by the Hessian fly in the Lake Erie group of counties has been so great that in many instances the yield per acre is as low as only five bushels per acre, although in the same localities larger yields per acre have also been returned. The fly has done comparatively little damage in the Georgian Bay counties, in Bruce, and in the central and eastern portions of the Province. There has been more or less rust complained of, the hot, damp weather prevailing at times being favorable for its development. In the reports as to the quality of the grain,

frequent mention is made of the kernel being shrunken, the intense heat of the early part of July, it is averred, causing premature ripening. Harvesting took place rather earlier than usual. While a number of correspondents speak of the crop being cut and housed in excellent condition, others complain that the rains prevailing at the latter part of harvesting, together with the great heat, caused some of the grain to sprout in the shock. Very little threshing had been done as correspondents wrote, but it is expected that returns will range from 5 to 40 bushels per acre."

According to November reports, the crop was a good deal below the average from various causes. In the west the ravages of the Hessian fly did great injury, and much of the surviving grain was light in weight on account of the extreme heat and drouth of June and July. Rust, cockle, and chess were also mentioned as among the season's drawbacks, and in some western localities the grain was spoilt by wet before it could be harvested. Reports from the eastern section—which was free from the Hessian fly—were somewhat more favorable, especially as regards the Ottawa valley and East Midland counties, where the crop was a fair one, the principal causes of injury being the excessive early rains and drouth before harvest, owing to which much of the grain was shrunken. There had been no noticeable damage from frost, but a devastating hail storm destroyed a large area of grain in Carleton county.

The New Fall Wheat. "The bulletin sent out in November, 1901, said: "There has been a very considerable and well nigh universal decrease in the acreage devoted to fall wheat, owing to the ravages of the Hessian fly. In order to secure the new crop against the pest, sowing has been deferred by many farmers to a later period than usual. While the bulk of the seeding was done during the first three weeks of September, a large number postponed the work until the following month. The condition of the ground was generally good, although dry in many localities, and where the young plants are visible they present as a rule a healthy appearance. Rain, however, is badly needed in some neighborhoods. In several western counties, more especially in those bordering on Lake Erie, the earlier sown wheat has been attacked by the Hessian fly which occasioned much injury. The principal varieties of fall wheat sown were Dawson's Golden Chaff, Red Clawson, and Genesee Giant."

Spring Wheat. This crop is grown chiefly in the eastern half of the Province, correspondents in the western counties having comparatively little to say about it. According to the August returns the yield was a variable one, although a large number of correspondents spoke of good returns. The crop, like fall wheat, suffered considerably from rust, and from an insect which did a good deal of injury by cutting the stock at the joint. Some also complained of the Hessian fly. Only a few had cut their spring wheat as correspondents wrote, but the bulk of the standing crop was then reported to be in fair condition.

November reports stated that but little spring wheat was grown this year in the western part of the Province, and where cultivated, the crop was a light one, owing to the same causes as injured other cereals. The yield in the eastern section was fair in most neighborhoods, but the grain was frequently small and shrivelled owing to the drouth.

Barley. The August bulletin had the following: "As in the case of other cereals, correspondents are not nearly agreed regarding the yield and quality of barley, although it is likely that it will be a better crop relatively than either fall or spring wheat. It has suffered but little from insect pests, and while some correspondents report the grain as discolored by rains during harvesting, others claim that the color is good, although the berry is rather small in size. The wet weather of May, and the excessive heat during a portion of July, are given as the chief causes of drawback to the crop. The straw is reported as short in length in various localities. Harvesting was general from the 15th to the end of July, although some fields were being cut as correspondents wrote during the first week of August."

November reports as to the barley crop were very variable. It suffered somewhat from the Hessian fly, and to a greater extent from the drouth, which resulted in premature ripening, rendering the grain light and the straw short. There was considerable difference in the sample, which many described as bright in color, while, in other neighborhoods, it was badly colored and of a low grade.

Oats. August returns regarding this crop were far from being unanimous. In various sections of the Province, more particularly in some of the Lake Ontario counties, large returns per acre were reported, but in some other localities the reverse was claimed. The crop also suffered from the abnormal heat of July, which hastened ripening, and in many cases prevented the heads from filling out thoroughly. Correspondents in eastern Ontario spoke of the crop as having ripened very unevenly, which delayed harvesting in some instances. Only a few had cut oats up to the first week of August. The straw in many cases reported was not as long as usual.

According to November statements the oat crop was unfavorably affected, especially in low lying ground, by the heavy rains in the spring, and injured by the extreme heat of midsummer and, as a consequence, much of it was light in the grain with short straw. The early sown crops as a rule yielded much better than those sown later in the season. In some cases injury was caused by rust. This crop appeared to have done slightly better in the Lake Erie and East Midland districts than elsewhere.

Peas. The August reports regarding peas varied considerably, except on the one point, that the crop was more or less injured by the "weevil" or "bug," although where grass peas were sown they escaped attack. Yields were expected to range from 10 to 30 bushels per acre. While some spoke of the straw as being of good quality, though rather short, others complained that it had been blackened by rain and heat. A good deal of the crop had yet to ripen as correspondents wrote.

The November bulletin had the following concerning peas: "Owing to the ravages of the pea bug in past years, a much smaller area was devoted to this crop than usual, and the injury done by the pest, together with the damage done by dry weather, have resulted in a small yield. Reports vary little as to locality, being generally unsatisfactory as regards the ordinary varieties. Grass peas, however, which have been largely raised in many neighborhoods, have as a rule done well."

Beans. Outside the county of Kent beans are not largely grown as a field crop. The beans were beginning to pod when correspondents wrote on the 1st of August, were in good condition owing to timely rains, and gave promise of an excellent yield.

According to November returns beans were, on the whole, a fairly good crop, though, owing to dry weather, the yield was a good deal decreased in many parts, the pods not being well filled.

Rye. Judging by the reports of correspondents in May, very little rye was being raised for the grain, most of the crop being cut for green food. Where grown, however, winter rye was described as looking well.

The August bulletin said: "Comparatively little rye is raised for the grain in this Province, the crop being used largely for soiling and other purposes. Where allowed to mature, it has turned out well in most cases, both as regards grain and straw, although in some instances affected by the great heat occuring in July."

The November reports were to the effect that rye appeared to have done better than the other cereals, the yield being generally fair though somewhat light in grain in many localities owing to drouth.

Buckwheat The yield and quality of buckwheat varied considerably, and the general result was about an average. The crop was generally well harvested, though in some places injured by rains.

Corn. The August bulletin said of corn: "Several correspondents lay stress upon the fact that this crop has become a most important factor in connection with cattle feeding. The advent of the silo has made corn one of the staple fodder crops of Ontario. Despite the fact that planting was delayed in many quarters owing to wet weather then prevailing, the crop has made good headway, and taken as a whole gives promise of doing well should early frosts not appear Complaints are made of injury by crows and blackbirds, but otherwise the crop appears to have escaped damage."

According to November reports the season was, on the whole, a favorable one for corn, notwithstanding the drawbacks of cold, wet weather in the spring and subsequent drouth. The yield was large wherever this crop was grown, and the quality generally good both for husking and fodder purposes. In but few localities were there any losses by frost reported, the crop having, as a rule, been saved in good condition, though there were exceptional cases of damage by smut.

HAY AND CLOVER.

As correspondents wrote under date of May 1st, it was generally considered that clover had come out of the winter in about the same condition as it had entered it, the damage done by "heaving" and ice being very small. No mention was made by injury to the crop from insects. Clover fields had been given a good start by timely rains and warm weather, and were then presenting an excellent appearance.

The August bulletin had the following regarding hay and clover: "This is, without doubt, the most successful crop of the season, both as to quantity and quality. The average yield for the Province will be much above the average, particularly in the St. Lawrence and Ottawa counties, where, many correspondents assert, the hay crop is the heaviest ever cut in that part of the Province. As a whole, the crop has been well saved, ensuring an abundance of excellent fodder, although, in a few sections, more especially in the Northern Districts, rain did more or less damage. Several correspondents speak of the splendid form in which some old meadows showed up. Clover did better than timothy, and the second crop is looking well. Cutting extended from the last of June to the third week of July."

Clover Seed. The following appeared in the November bulletin: "Both red and alsike clover have done well, the yield of seed being unusually good. The stalks are generally short, but the heads are well filled and the seed plump. The drouth is responsible for a shortage in some quarters, while the midge has affected the crop injuriously in a small percentage of instances. Very little damage was occasioned by frost."

FIELD ROOTS.

Potatoes. Judging by the number of correspondents who reported in August "one of the worst years yet for potato bugs," the beetle must have done a lot of injury. This coupled with the dry weather prevailing during the previous month or more, told greatly against the chances of the crop; and while some correspondents then spoke of a fair, and even a good prospect, the bulk of those reporting described the tubers as small in size and likely to be considerably below the average in yield. This was especially so in the case of early planted potatoes. It was pointed out, however, that recent rains had greatly improved the outlook for the crop. No blight had been reported up to August, and several correspondents referred to this fact with much satisfaction.

November returns were thus summarized in the bulletin issued early in that month: "The report of correspondents as to the potato crop are very variable. In the eastern section the yield is a light one in most neighborhoods, a great proportion having been destroyed by rot, especially on clay soils and low-lying lands. More favorable accounts come from the west, where this kind of disease is not nearly so prevalent. In that part of the Province, late sown potatoes have generally yielded well, while those put in early in the season have suffered from dry weather or frost, and the bug has been in evidence as usual. The crop has practically all been secured."

Carrots. This class of roots was seldom referred to by correspondents in the reports sent in at the beginning of August, although what little was said indicated that they were doing well where grown. November returns were to the effect that the season had been a good one for carrots, and that the crop had been housed in excellent condition.

Mangel Wurzels. This crop did well, and the opinion was expressed that mangels appeared to be growing in favor, it being claimed for them that they were better able to withstand the drouth than turnips. The yield was a large one, and the crop was gathered without any drawbacks.

Turnips. Reports concerning turnips varied considerably during the early history of the crop. In many quarters there was poor germination of seed, and the fly also threatened loss, but in other sections a large crop was promised. November returns were generally favorable, although many of the turnips were considered to be small in size. Most of the crop was put by in good condition by the 1st of November.

Sugar Beets. In only a comparatively few localities have sugar beets been produced, but if the results continue to be as favorable as those of the season of 1901 they are certain to be more extensively sown The output has been good as regards both bulk and quality in almost every case.

FRUIT AND FRUIT TREES.

The early part of the season opened rather auspiciously for fruit, as will be seen by the following from the May bulletin: "In the western portion of the Province, where most of the orchards are to be found, fruit trees have come through the winter in splendid condition. In the counties along the St. Lawrence, however, an "ice storm" in the spring had the effect of breaking off many of the branches, and in some cases killing the trees. A number of fruit trees in the northern districts are also reported to have died, although the cause has not been given. Orchards were coming into bloom as correspondents wrote, and nearly every class of fruit was giving promise of a generous yield should frost and heavy rains keep off during the period of "setting," although some state that it will be a comparatively "off year" for apples. A number of correspondents in various parts of the Province refer to the presence of the tent caterpillar, but this pest does not appear to be as common as it was a year ago. Odd mention was made of injury to fruit trees by field mice."

August returns showed that it was going to be an "off year" indeed for apples and cherries, notwithstanding their excellent prospects at the time of blossoming. The midsummer bulletin said: "Reports regarding apples are far from satisfactory. Although there was plenty of bloom in many localities during spring, much of the fruit did not set, and later on most of the apples fell off before maturing. There is not likely to be half an average yield. Several correspondents, however, point out that the Spy is doing better than any other of the winter varieties. Pears may be ranked as fair in quality and about an average in yield. Only one correspondent speaks of blight. Peaches will be a fair crop in the western Lake Erie Section, but will hardly do so well in the Niagara district. No mention has been made of disease in this connection. Plums range in yield from an average to failure, according to locality and care. The cur-

culio has been very active, and some of the crop has rotted before ripening. Cherries have suffered from rotting on the tree, and complaints of black-knot are also made, but in some of the western counties this fruit did very well. Grapes promise a good yield, notwithstanding the poor start in the spring owing to the cold and wet conditions then existing. Small fruits as a class did well, although raspberries suffered from the dry weather of July."

The November bulletin said: "Fruit trees are in good condition generally, and there has been an unusually heavy growth of wood. The season has been a poor one for fruit, more especially for apples, the staple orchard crop, of which there is a shortage everywhere. This appears to be due to a combination of causes, the principal enumerated being wet weather during the blossoming season, heavy winds, and the attacks of the tent caterpillar, codling moth, borer, and other insect pests. Shipments have consequently been light, many localities not having enough for local consumption. Insects also have proved injurious to the other fruits, but many correspondents note a plentiful supply of plums, pears, and peaches. Cherries and small fruits did fairly well in many places, though the quality was very variable. Grapes were in the main a good crop. The reports emphasize the need of spraying, as, wherever this process was followed, the losses by insect pests were considerably lessened."

MISCELLANEOUS.

Flax. This crop has done well where raised, but it is not so largely grown as formerly. It has succeeded better this season in the Lake Huron counties than in the West Midland group.

Hops. Correspondents had very little to say about hops. The few observations made were to the effect that where grown the crop is in good condition.

Lucerne. This crop is increasing in favor, more especially in Western Ontario, where it is used as green feed to supplement pastures during June, July, and August.

Rape. A large number of farmers are growing rape every year. Sheep and young cattle, it is claimed, do well upon it, and some also feed it to hogs with good results. The season was a favorable one for the crop.

Threshing and Marketing. The following is from the November bulletin: "Threshing has been carried on actively and in many sections the work has practically been completed. Peas were marketed early on account of the bug, and a large quantity of oats have been disposed of; but wheat has not been moving very lively, and much of the barley is now fed on the farm."

Farm Improvements. November reports regarding farm improvements were to the following effect: "Good progress has been made in underdraining, more especially in the west, and some of the Ottawa River counties. In many localities where little advance is noted, many of the farms have been previously drained. In nearly all neighborhoods the supply of tile was sufficient. The supply of skilled labor was generally adequate to the requirements, as in most cases the work was done without engaging special help. Tile draining machines are very little used, and are not considered as satisfactory as hand labor. Almost everywhere wire fencing is rapidly taking the place of rail and other wooden fences, and in most localities, considerable improvements in the character of houses and barns are noted."

Fall Plowing. The dry weather which characterized the fall in most parts of the Province considerably interfered with the progress of fall plowing, rendering the soil hard and dry, more especially in the Lake Erie counties, where the work was reported as backward. In other localities, greater advances had been made, many farmers having nearly or quite completed their plowing at the time correspondents wrote, under date of November 1st. Apart from the prevalent drouth, the weather was highly favorable for the work.

LIVE STOCK AND THE DAIRY.

May returns were to the following effect: "All classes of live stock came through the winter in good condition. Horses especially look well, although there have been many cases of coughs and other light forms of distemper reported. Cattle were rather thin, but on the whole are healthy. A few cases of trouble in calving have been reported, together with an odd mention of "blackleg" in Leeds and Renfrew, and of lumpy-jaw in Huron. Sheep are reported to be in particularly fine form. Scab has disappeared, and lambs are plentiful and vigorous. Swine have commanded more attention than ever before, owing to encouraging prices; but while litters have been large there have been heavy losses among these young pigs, and during the latter part of the winter many hogs suffered from a form of rheumatism or "stiffening," which, however, appeared to wear off when the animals were turned out in the spring. In most parts of the Province there was an abundance of fodder for live stock during the winter, although a few farmers are said to have been compelled to buy feed in order to supplement their supplies. Some correspondents claim that the bacon industry has somewhat lessened the number of beefing animals raised by Ontario farmers; yet it would also appear as if all classes of live stock are receiving better care than ever before."

Pastures were in prime condition in the early part of the season, but fell off about the second week in July, when the warm weather began to dry up the grass. However, heavy rains were falling as correspondents wrote, about the beginning of August, and the prospects were that pastures would soon pick up again. It was then thought that the milk supply, which had fallen off correspondingly with the condition of pastures, would likely be materially improved. The decline in the milk flow was not attributable to the dry pastures only, but also to the teasing of the horn fly, which was most annoying during the warm term, and helped to get cattle somewhat out of condition. Prices for both cheese and butter were most encouraging to dairymen, and the bulk of correspondents were cheerful as to the outlook for fall and winter supplies, there being an abundance of hay, an excellent promise of corn, and a fair chance yet for roots, although straw, it was estimated, would be a short crop indeed.

The November bulletin thus described the situation: "Pastures were in good condition during the early fall in the eastern portion of the Province, although in the more western counties comparatively bare fields were common. Live stock of all kinds are in an unusually healthy state, an odd case of cholera in hogs being the only disease reported. While a few correspondents describe cattle as being rather thin, most of those reporting consider them to be in good average condition. In some localities the horn-fly was annoying. Some correspondents state that sheep are not kept in as large numbers as formerly, but they appear to be in good shape where raised. Swine are being fed in large numbers, and are being turned off more or less steadily the year around at weights ranging from 180 to 220 pounds. One correspondent characteristically refers to the hog as the "farmer's Klondike." The supply of fodder is said to be ample for the winter, hay, corn, and roots being abundant, although there has been a general shortage of straw. The silo is still growing in favor, an unusual number having been built in the West Midland district this year. Several correspondents speak approvingly of the husker and shredder as a means of preparing corn for fodder. Taking them all together, reports concerning live stock may be considered as satisfactory."

Poultry. Judging by the remarks of correspondents it would seem that farmers are taking much more interest in poultry raising. More care is now being taken in the selecting, feeding, housing, and the general handling of fowl, and the question of profit and loss is being more carefully studied. The Plymouth Rock appears to be the most popular breed of hens. Turkeys are also being raised in larger numbers than ever. Several correspondents point to the fact that more poultry are being disposed of than in former years. The general condition of all classes of fowl may be described as good, although a correspondent in Wellington referred to a disease

resembling blind staggers and another correspondent in Prince Edward described a disease, which he said was not hen cholera, where the fowl were attacked, got "dumpish," and died within forty-eight hours.

VALUES PER HEAD. The statistics of live stock will be found on pages 35-41. The following table gives the average value per head of stock on hand for the past ten years :

Classes of live stock.	1901	1900	1899	1898	1897	1896	1895	1894	1893	1892
Horses:	$	$	$	$	$	$	$	$	$	$
Working horses	85	79	72	65	61	63	66	74	80	89
Breeding mares	87	81	74	68	64	64	68	76	83	93
Colts	57	53	49	44	41	41	44	48	52	55
Stallions	346	368	332	303	283	263	265	328	356	407
Cattle:										
Working oxen	41	42	46	43	42	43	45	46	47	48
	$ c.	$ c	$ c	$ c.	$ c.	$ c.	$ c.	$ c.	$ c	$ c.
Milch cows	31 74	31 01	30 31	28 28	26 13	77 60	29 74	31 02	31 63	29 95
Store cattle	29 25	29 38	29 27	26 49	23 89	24 0	25 36	26 75	27 45	27 42
Other cattle	14 14	13 67	13 09	11 9	10 62	11 19	12 14	12 91	13 40	13 37
Sheep:										
Over one year	5 31	5 17	5 01	4 76	4 37	4 41	4 62	5 14	5 62	5 58
Under one year	3 37	3 31	3 15	2 91	2 62	2 65	2 85	3 26	3 56	3 56
Hogs:										
Over one year	14 34	12 09	12 23	12 63	11 40	11 13	11 87	13 08	13 97	10 59
Under one year	4 81	4 24	3 92	3 91	3 67	3 70	3 98	4 30	4 48	3 96
Poultry:	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts	cts.	cts.
Turkeys	65	65	65	63	61	65	65	67	69	66
Geese	60	59	57	55	56	56	56	57	58	57
Ducks	31	30	29	..	..	..	..	..	..	..
Other fowls	24	23	22	22	21	22	22	23	25	24

BEES AND HONEY. The August bulletin had the following regarding the apiary : "Little or no disease has been reported among bees. There has been plenty of swarming, and stocks have been strong and active. But for the dry weather of July, an immense yield would have been recorded, and some apiarists did remarkably well. The average yield, however, will not go over 50 pounds per hive. Some excellent basswood honey is reported, while a fair share of clover honey was also gathered. Eastern apiaries did better than those in the west."

November reports were to the effect that very little disease of any kind had been reported among bees. The average yield of honey was estimated at about fifty pounds per colony, a considerable addition of buckwheat honey having been made in some sections of the Province to the clover and basswood stock already on hand. Bees were expected to go into winter quarters with a fair amount of stores, and as prices have been good, owing to the scarcity of fruit, the season of 1901 may be regarded as having been a good average one for the apiary.

THE DAIRY. The following also appeared in the November bulletin : "The season of 1901 has been a fair one for dairying, although some correspondents complain of the low price prevailing for cheese. Creamery plants have been put into a number of cheese factories, cheese being made from May to October, and butter during the winter months. The cream separator is said to be of great assistance to those making home-made butter. Both creamery and home-made butter are described as having been of good quality as a whole, and prices as a rule have been satisfactory. Many farmers engaged in dairying are now systematically putting in ice in order to meet conditions of temperature during mid-summer. Shorthorn grades are still most commonly found in Ontario dairies, although Holstein and Jerseys are coming into favor ; while Ayrshires retain supremacy in the cheese-producing counties along the St. Lawrence."

CHEESE FACTORIES. The statistics of the cheese made in factories are given by counties in Table xxvii (page 44), together with totals for the Province for ten years. There was a slight decrease in the number of factories operated but the make of cheese was 134,942,517 lbs., or over seven million pounds greater than in 1900. The value, however, was less by $750 000,

owing to a falling off of $1.10 per 100 lbs. in the market price. The amount paid to patrons for milk, including delivery to the factory, was $10,811,538, or 75.4 cents per 100 lbs.

Creameries. The following comparative table gives the statistics of the creameries operated in Ontario for the nine years 1893-1901, showing the quantity and value of butter made, the average number of patrons, the average price of butter per pound, and the amount paid to patrons for milk or cream supplied :

Year.	No. of creameries in operation.	Butter made.		Average No. of patrons.	Average price of butter per pound.	Amount paid to patrons for milk or cream delivered.
		Quantity.	Value.			
		lb	$		cts.	$
1901	286	9,047,260	1,798,264	19,896	19.88	1,548,576
1900	308	9,041,468	1,819,290	21,809	20.12	1,589,291
1899	323	9,113,964	1,746,362	22,090	19.16	1,448,411
1898	282	9,008,992	1,632,234	22,741	18.12	1,294,220
1897	214	7,708,265	1,403,669	18,909	18.21	1,139,463
1896	170	6,033,241	1,101,232	12,245	18.25	.....
1895	135	4,553,768	868,382	9,664	19.07	.....
1894	115	3,162,550	662,297	8,293	20.94	.....
1893	74	2,707,570	574,156	7,852	21.21	.....

TOBACCO.

This crop is confined chiefly to Essex and Kent, the former county having about two-thirds of the acreage of the Province, although even in these counties it is not grown to a large extent. Correspondents reporting on the 1st of August spoke of the plant having done well, although some complained of "worms" being very bad. Much of the tobacco was planted rather late this year on account of the rain.

Only a few correspondents made reference to tobacco in the November returns. Where mention of it was made, however, the crop appeared to have matured well and to have escaped serious injury, except in a few instances.

The following table gives the acreages for the six years 1896-1901, and the yields for the last four years :

Year.	Essex.			Kent.			The Province.		
	Acres.	Total yield.	Yield per acre.	Acres.	Total yield.	Yield per acre.	Acres.	Total yield.	Yield per acre.
		lbs.	lbs.		lbs.	lbs.		lbs.	lbs.
1901	1,968	2,290,752	1,164	584	564,728	967	2,936	3,113,580	1,061
1900	1,620	2,068,500	1,275	449	583,700	1,300	2,477	2,854,960	1,140
1899	1,411	1,636,760	1,160	338	415,402	1,229	2,206	2,241,562	1,016
1898	5,086	7,095,970	1,395	2,140	3,013,120	1,408	7,871	10,560,590	1,342
1897	422	.....	.....	28	.....	.....	994	.....	.....
1896	315	.....	.....	21	.....	.....	667	.....	.....

There was a sudden boom in the growing of tobacco in Essex and Kent in 1898, but a decided shrinkage in the area occurred in the following year. There has been a steady increase in acreage in 1900 and 1901, however, and the rather satisfactory showing in Essex this year should add to the popularity of the crop. The average yield per acre of the Province has not varied greatly during the last three years.

"Frenching" of Tobacco. In the August crop returns one of our correspondents referred to the "Frenching" of some tobacco that he was growing. As no other complaints were received, it would appear that the disease was local rather than general in the Essex district.

Prof. Wm. Lochhead, Biologist at the Ontario Agricultural College, has furnished the Department with the following notes regarding the disease :

This disease of tobacco is known under different names in different sections. It is known as "Frenching" in the South, as "Mosaic Disease," "Brindle," and "Mongrel Disease" in the Northern tobacco districts, and "Calico Spot" in Connecticut and elsewhere. It is not yet quite certain that the disease known as "Frenching" in Essex is the same as that known under the same name in the South, for the characteristic feature of the disease in Essex is the yellowing of the main leaves and the production of tufts of rigid, worthless leaves on the larger leaves, while in the South the chief characteristic of the disease is a mottling and stiffening of the leaves.

The cause of the disease is not definitely known. Some investigators attribute the cause to an unknown parasite, probably bacterial; while others consider it a disease arising from purely physiological causes, associated either with movements of reserve proteids during growth, or with sudden changes of atmospheric conditions and unsuitable soil conditions.

The disease may occur quite early in the life of the tobacco plant—even in the seed-bed—and usually attacks the older leaves first. Apparently the disease is not contagious, and is not rapidly propagated through the soil of the field, nor will seeds from diseased plants necessarily produce unhealthy plants. In some regions diseased plants are more abundant on close, clayey soils than on open, porous soils.

The conditions which favor "Frenching" are : Unsuitable soil nourishment; very moist soil with little light; atmospheric conditions promoting rapid growth, and poor seed. It is a fact well known to most practical tobacco growers that "Frenching" is very liable to occur whenever a rapid production of sprouts on moist soil takes place.

Along the line of prevention, it has been recommended to keep the plants in the seed-bed cool (not too warm); to change the seed-bed; to practice rotation of crops; to remove the stubs of diseased plants after the crop is harvested; the use of chemical fertilizers instead of stable manure; the addition of lime, or some other substance, to the soil which will render it more porous; and the protection of plants at critical seasons from too sudden exposure to sunlight.

It is evident that a more detailed study of this disease is necessary before the real cause is discovered, and definite remedies or preventives can be applied.

LABOR AND WAGES.

The following was contained in the May bulletin: "The remarks of correspondents regarding farm labor and wages are deserving of careful consideration. The rush to the towns and cities continues, and it would appear as if urban attractions are drawing away a majority of the more ambitious and energetic young men and women from the farm. A considerable number of strong and active young men also leave agricultural pursuits for river driving and other lumbering operations just when the land is most in need of their services. Many complaints are made as to the inferior quality of most of the work now offering on our farms, and some correspondents assert that rates of wages are so high that a number of farmers will have to let a portion of their farms go untilled rather than hire hands at prevailing prices. A correspondent in the county of Grey mentions that the ten hour a day system has been introduced into his neighborhood with beneficial effect, both man and beast benefitting thereby, while just as

much work is done as under the old plan of working until sundown. Some correspondents also speak of the benefit resulting from 'tenant houses' being built on farms, and married men being given employment all the year around. Domestic servants on the farm are said to be even scarcer than ever."

August returns were thus summarized: "While a few correspondents state that there was a sufficiency of labor during harvest most of those reporting speak of the scarcity of laborers, some saying that it was necessary to get boys to attempt the work, while one correspondent in Oxford tells of women driving binders, rakes, etc., in order to save the crops. As a rule no reasons were given for the lack of assistance on the farm, although a few correspondents refer to the attractions of Manitoba and the mining regions. Wages by the day during harvest ranged from $1 to $1.50, $1.25 being common. Domestic servants, as usual, are hard to procure for work on the farm."

The question of labor and wages was thus dealt with in the November bulletin: "The great majority of correspondents report that the supply of farm labor was inadequate to meet the demand. The reasons given are temporary or permanent departures for Manitoba and the North-west, the high wages paid in the lumbering industry, and the migration to the cities and larger towns. Those correspondents who consider any change in the rate of wages likely nearly all predict an increase, but a large number express the opinion that the farmers cannot afford to pay more than present rates. Domestic help continues exceedingly scarce, the variety of other callings and employments now open to women attracting girls away from the farm. Immigration is the remedy generally suggested, often coupled with the proviso that the new arrivals must be of the 'right sort,' and disparaging criticisms on the immigrants who have been brought out."

The following table gives the average rate of wages paid farm laborers by the year and by the month, with and without board, for ten years, together with the average for twenty years; also the monthly wages paid domestic servants on the farm:

Farm Laborers.	1901.	1900.	1899.	1898.	1897.	1896.	1895.	1894.	1893.	1892.	1882-1901.
Per year in yearly engagements:	$	$	$	$	$	$	$	$	$	$	$
With board.....	165	155	149	148	144	144	150	156	160	156	157
Without board ..	263	248	243	246	236	243	246	247	255	253	250
Per month for working season:	$ c.	$ c.	$ c.	$ c.	$ c.	c.	$ c.	$ c.	c.	c.	$ c.
With board	17 78	16 57	15 38	15 31	14 29	14 57	15 38	16 55	17 13	16 52	16 78
Without board ..	27 05	25 73	24 93	25 44	24 47	24 11	25 45	25 61	25 97	25 92	26 19
Domestic servants per month	6 90	6 65	6 19	6 09	5 97	6 11	6 07	6 23	6 47	6 21	6 26

TEMPERATURES OF 1901.

TABLE I. Showing for each month the highest, lowest, mean highest, mean lowest and mean temperature at the principal stations in Ontario in 1901; also the annual mean for each station.

MONTHS.		Saugeen	Birnam.	London.	Woodstock.	Stoney Creek.	Toronto.	Lindsay.	Gravenhurst.	Ottawa.	Rockliffe.
		°	°	°	°	°	°	°	°	°	°
January	Highest	43.8	43 2	43 0	42 2	48.0	45.4	39.6	41.0	40.0	38.0
	Lowest	-3 0	-7.0	-6.0	-6.0	-8.0	-10.9	-21.3	-27 5	-24.0	-38.0
	Mean highest	30 2	28 6	30 4	29.2	33.0	31.5	25.3	25.3	21.6	17.7
	Mean lowest	15 2	17.2	15.6	14.8	19 2	16.7	7 6	5.0	1.8	-7.7
	Monthly mean	22 7	22.9	23 0	23.0	26.5	23.9	16.5	15.2	11.7	5.0
February	Highest	37 0	34 5	33.0	33 0	37.0	34.0	31.6	31 0	34 0	32.0
	Lowest	-2.0	-14.0	-11 0	-4.0	-2.0	-2.4	-12.7	-19 0	-10 0	-30.0
	Mean highest	24.1	22.4	22 9	21.7	26 7	24.3	20 8	20.1	20.8	19.6
	Mean lowest	9 3	4 6	4.4	5 6	9 4	8 9	1.2	-2.7	1.9	-8.9
	Monthly mean	16.7	13.5	13 7	14.7	18 2	16.9	11.0	8.7	11 4	5.4
March	Highest	47.8	61 3	60.5	52 0	50 0	45.6	42.2	43 0	40 0	46.0
	Lowest	2 0	-4.7	-5.5	-5 0	0 0	0.0	-5.3	-7.0	-8 0	-29 0
	Mean highest	34.9	36 6	38.8	36.6	38.1	36.8	33.9	33 4	32.9	31.5
	Mean lowest	18.6	22 5	21.6	19.8	24.8	23.1	16 3	14.6	15 8	6.2
	Monthly mean	26.7	30.0	30.2	28.6	31.5	29.9	25.1	24.0	24.3	18.8
April	Highest	69 0	80.7	80 0	77.0	82.0	75 6	80.6	78.0	81.0	82 0
	Lowest	25 1	24.5	24.0	22.0	28 0	30.2	23.7	18.0	27.0	11.0
	Mean highest	51.8	52.5	56.6	54.4	53.4	54.8	55.6	55 6	55.8	57.3
	Mean lowest	34 7	33 1	35.0	35 7	37.0	37.6	35.7	34.2	37.1	31.8
	Monthly mean	43 2	43.9	45.8	45.1	44.9	45.8	45.6	44 9	46.4	44.4
May	Highest	79.2	78 6	79 0	78.0	82.0	79.2	80.1	82.0	81 0	83 0
	Lowest	30 1	30 0	30.0	31.0	35 0	33.0	31.0	28.0	39 0	26 0
	Mean highest	61 4	64.4	66 4	63 5	62 8	63 9	66.4	66.1	67.2	67.7
	Mean lowest	42 7	45.5	44.7	44.5	44.9	45 9	45.4	43.8	47.1	40 9
	Monthly mean	52 1	54.9	55.5	54 1	52.7	54 0	55.9	55.0	57.2	54.2
June	Highest	89 4	95.0	93 0	91.0	98.0	97.1	94.7	91.0	96.8	98.0
	Lowest	36.0	32 5	33 0	37 0	40.0	40.5	37.7	36.0	44 0	30 0
	Mean highest	73.2	78.8	78 6	75.1	79 1	77.1	77.1	80 0	78.4	78 6
	Mean lowest	53 7	56.2	55.1	52.5	53.2	55.0	53.8	52.6	56.6	48 8
	Monthly mean	63.4	67 5	66.8	65.2	67.3	65.1	65.4	66.3	67.5	63.7
July	Highest	92.4	98 7	98 0	93 0	100.0	94 0	94.7	95.0	98.3	99.4
	Lowest	51 3	48 0	49 5	50.0	56.0	53 3	49.9	50.0	50.0	37 0
	Mean highest	78.2	84 7	86.3	82.6	87.0	84 2	82.7	81.3	82.3	81.9
	Mean lowest	61.5	63.4	62.1	61 3	66.5	63.3	60.6	59.1	61.4	52.1
	Monthly mean	69.8	74 0	74 1	71.4	75.2	73.5	71.6	70.2	71.8	67.0
August	Highest	87.2	90.7	88 0	86 0	88 0	87.4	88.8	86.0	96 8	88 0
	Lowest	47 0	44 7	43 0	42.0	50.0	49.7	47 3	46.0	44 0	35.0
	Mean highest	74.3	79 0	80.0	78.0	80.3	78.2	77.9	77.6	78.3	77.8
	Mean lowest	59.1	58.8	57 2	56 1	60.3	59.9	56 9	56.3	58.3	49.0
	Monthly mean	66.7	68.9	68 6	68.1	69.7	68.3	66.4	66 5	68.3	63.4
September	Highest	81.0	87.3	87.0	84.0	91.0	86.0	87.0	85.0	95.8	91.0
	Lowest	38.2	33 3	33.5	34 8	37.0	35.6	33.2	30.0	31 0	23 0
	Mean highest	67.9	70 7	71 8	69 6	73 5	70 7	70 2	69.4	71.1	70.2
	Mean lowest	52.0	52 2	50 8	50.7	54.4	52.5	49.2	48 0	50.4	41.3
	Monthly mean	59.9	61.4	61.3	60.2	63.0	60.8	59.7	58.7	60.7	55.7
October	Highest	72.0	72.4	73.0	69.0	76.0	72 0	70.5	71.0	71.0	74.9
	Lowest	24 6	26.3	22 0	25 0	26.0	27.8	23.0	25.0	26.5	12.0
	Mean highest	58.0	58.6	61 0	57.1	64.6	58.1	56.6	55.7	55 9	56.3
	Mean lowest	41.3	41 0	37.8	38.4	41.1	39 0	37.2	38 5	39.6	33.1
	Monthly mean	49 8	49 8	49 4	47.8	52.6	48.2	46.9	47.1	48.3	44.6
November	Highest	56.3	59 5	60 0	55.0	65.0	60 8	58.9	53.0	58.0	60 0
	Lowest	17 0	16.0	8 0	15.0	18.0	14 5	4.3	8.0	-2.0	-15.0
	Mean highest	41 0	39.7	41.0	39 3	43.4	41.0	37.0	35 4	33 8	32.7
	Mean lowest	28 5	29.6	27.5	27.8	29 6	28.5	22.6	23 5	22 3	17.5
	Monthly mean	34.7	34 7	34.2	33 6	35.8	34.6	29.4	29.3	28.1	25.1
December	Highest	48.8	46 9	57.0	57 0	62.0	56 2	50 6	48 0	52.0	40.0
	Lowest	1.0	-5 0	-4.5	-3 0	-2 0	0 3	-7 1	-12.0	-12 0	-35.0
	Mean highest	32 1	29 8	32 0	31.5	35.3	33.2	28 4	28 7	25.9	22.6
	Mean lowest	18 9	17 6	17.5	16 0	20.4	20 6	14.3	13.7	11.1	2.6
	Monthly mean	25.5	23.7	24 8	24 6	28.1	26 8	21.4	21.1	18 5	12.6
Annual mean		41 3	45 4	45 6	44.7	47.1	45 6	42.9	42 3	42 9	38.3

AVERAGE OF TEMPERATURES FOR TWENTY YEARS.

TABLE II. Showing for each month the annual average of the highest, lowest, mean highest, mean lowest and mean temperature at the principal stations in Ontario, derived from the twenty years, 1882-1901; also the annual mean at each station for the same period.

MONTHS.	Saugeen.	Birnam.	London.	Woodstock.	Stoney Creek.	Toronto.	Lindsay.	Gravenhurst.	Ottawa.	Rockliffe.
	°	°	°	°	°	°	°	°	°	°
January — Highest	44.6	46.5	46.7	46.3	51.4	45.0	41.6	41.8	40.3	37.8
January — Lowest	-7.2	-9.9	-9.5	-4.9	-4.6	-8.1	-20.9	-27.0	-22.3	-33.4
January — Mean highest	27.9	26.9	28.6	27.8	32.9	28.7	24.1	23.8	19.8	18.3
January — Mean lowest	13.1	14.6	13.7	11.1	19.0	14.0	6.4	4.0	1.3	-5.9
January — Monthly mean	20.6	20.7	22.1	20.7	23.3	21.9	15.5	14.6	11.0	6.3
February — Highest	44.9	47.4	46.4	45.6	48.1	44.1	42.0	42.4	40.0	41.7
February — Lowest	-10.9	-13.5	-11.9	-12.0	-6.4	-8.3	-18.4	-25.6	-21.9	-34.6
February — Mean highest	27.7	27.2	28.6	28.3	31.8	28.8	25.6	25.3	22.0	22.0
February — Mean lowest	11.5	13.0	12.3	10.5	16.3	13.4	6.0	4.1	3.1	0.8
February — Monthly mean	19.2	20.1	21.2	20.7	23.1	21.6	15.1	15.3	13.1	8.8
March — Highest	51.4	56.2	56.1	54.5	57.5	51.9	48.5	48.1	45.3	49.1
March — Lowest	-4.7	-4.8	-3.4	-4.2	4.5	-2.5	-8.5	-14.8	-10.1	-25.3
March — Mean highest	33.9	34.9	36.2	35.3	39.1	35.0	32.9	32.8	31.4	31.9
March — Mean lowest	16.8	19.7	19.1	17.5	24.3	20.5	14.6	11.7	13.3	5.6
March — Monthly mean	25.1	27.0	28.4	27.1	30.4	27.9	23.5	22.6	22.6	18.9
April — Highest	73.2	77.7	76.6	75.8	78.0	71.1	74.8	71.2	74.2	75.1
April — Lowest	14.5	17.4	18.4	16.9	23.6	21.0	13.3	10.8	13.9	5.6
April — Mean highest	49.6	53.1	53.2	53.2	54.2	50.8	52.2	50.2	51.0	51.4
April — Mean lowest	31.3	33.9	32.6	32.0	36.7	33.9	30.6	29.0	30.9	16.2
April — Monthly mean	39.8	43.5	44.7	43.1	44.1	42.2	40.9	39.6	41.4	38.3
May — Highest	79.6	82.3	81.8	80.7	83.8	78.2	82.1	81.0	82.8	85.1
May — Lowest	28.9	29.1	30.3	29.3	34.7	32.4	28.7	28.2	31.5	24.7
May — Mean highest	60.9	65.6	66.2	64.6	65.8	62.5	65.6	63.9	66.2	65.8
May — Mean lowest	41.2	44.0	44.2	42.4	45.8	43.9	42.0	41.9	44.1	38.6
May — Monthly mean	50.5	54.8	56.3	54.3	54.8	53.1	53.6	52.8	55.4	51.9
June — Highest	85.6	88.8	88.3	87.8	92.3	87.2	89.3	87.6	88.7	89.9
June — Lowest	37.6	37.4	38.8	38.7	43.9	42.8	38.9	37.4	42.0	34.0
June — Mean highest	71.2	76.1	76.8	76.3	78.9	74.2	76.6	75.4	76.4	76.0
June — Mean lowest	51.0	53.6	53.8	52.0	57.2	54.0	51.7	51.5	54.4	47.9
June — Monthly mean	60.8	65.1	66.5	65.1	66.7	63.9	64.0	63.5	65.8	61.9
July — Highest	87.5	92.9	91.9	90.8	95.5	90.1	91.8	89.7	91.2	91.2
July — Lowest	42.9	42.0	43.9	43.7	49.7	47.9	43.2	43.3	46.8	40.1
July — Mean highest	77.9	80.5	80.3	79.9	83.5	78.5	80.1	78.4	79.1	78.3
July — Mean lowest	55.4	56.6	57.6	55.2	61.3	58.2	54.9	55.4	57.7	52.7
July — Monthly mean	64.9	68.7	70.0	68.4	71.4	68.2	67.2	66.9	68.6	64.8
August — Highest	86.6	91.4	90.5	89.8	95.4	88.2	90.4	88.6	89.3	89.0
August — Lowest	41.8	41.0	40.3	41.1	47.2	46.3	39.9	40.3	43.0	37.4
August — Mean highest	74.0	77.6	77.9	77.8	81.6	76.4	77.8	76.3	76.3	75.4
August — Mean lowest	55.0	55.3	54.5	51.5	59.6	52.1	53.2	53.6	55.1	50.5
August — Monthly mean	66.2	66.3	67.3	65.9	69.9	66.4	64.8	64.5	66.0	61.5
September — Highest	84.9	87.7	86.6	86.5	91.0	84.8	86.8	84.4	85.3	85.0
September — Lowest	32.8	33.1	31.8	31.3	36.7	36.6	30.6	30.7	32.1	28.8
September — Mean highest	68.3	70.9	71.2	70.4	74.4	68.8	69.5	68.8	68.5	67.7
September — Mean lowest	49.2	50.3	49.4	46.9	53.2	50.4	46.3	46.8	47.4	43.2
September — Monthly mean	57.7	60.6	60.8	59.2	62.3	59.5	57.2	57.3	57.9	53.6
October — Highest	74.2	76.4	75.1	74.5	77.1	72.3	73.8	72.6	70.8	72.9
October — Lowest	24.5	24.2	23.4	23.0	26.8	26.2	20.8	21.9	23.4	18.2
October — Mean highest	56.2	57.2	57.6	56.4	61.6	55.7	55.1	55.5	53.7	53.2
October — Mean lowest	39.3	40.3	38.2	36.8	42.2	39.9	36.0	37.1	36.3	33.3
October — Monthly mean	46.8	48.8	48.3	47.1	50.1	47.9	44.8	45.6	45.2	42.2
November — Highest	61.2	63.1	62.1	61.6	66.1	59.5	59.8	59.2	57.9	56.8
November — Lowest	13.6	13.2	12.0	10.8	17.3	14.0	4.6	7.2	5.3	0.7
November — Mean highest	48.0	42.5	43.7	42.6	46.9	43.1	40.3	40.4	38.3	36.8
November — Mean lowest	29.9	30.6	29.3	27.7	32.8	30.5	25.8	25.9	25.0	21.7
November — Monthly mean	35.8	36.6	36.9	35.8	39.3	36.9	32.8	33.1	31.7	28.8
December — Highest	50.4	49.9	57.0	50.2	55.3	48.5	45.4	45.4	43.1	41.8
December — Lowest	-0.7	2.2	-3.0	-4.4	0.6	-2.2	-13.7	-13.9	-16.3	-25.2
December — Mean highest	33.4	32.2	33.6	32.5	37.1	33.9	29.4	29.7	25.3	24.7
December — Mean lowest	20.8	21.1	20.1	18.0	23.7	21.0	13.8	13.7	9.4	5.3
December — Monthly mean	27.0	26.7	27.4	26.2	30.4	27.8	22.0	22.2	17.8	14.8
Annual mean	42.9	44.9	45.8	44.5	47.2	44.8	41.9	41.5	41.4	37.6

RAIN AND SNOW.

TABLE III. Summary of the total fall of rain and snow, and the number of days on which rain and snow fell in Ontario during the year 1901 at stations reporting for the whole year, and the average for the Province.

Station.	Rain.		Snow.	
	Inches.	Days.	Inches.	Days
ALGOMA—				
Port Arthur	20.27	66	224.0	27
White River	16.03	77	112 5	87
Providence Bay	26 06	96	114.0	58
Bruce Mines	25.31	79	80.5	28
Cockburn Island	27.99	79	64.2	35
BRANT—				
Paris	25.51	91	45 0	21
Brantford	22.54	63	56 5	29
BRUCE—				
Lucknow	23.73	94	127.2	76
N. Bruce	18 98	97	99.5	63
Point Clark	13.31	23	67.5	22
Saugeen	23.23	112	127.3	94
CARLETON—				
Ottawa	24 06	93	92 5	36
DUFFERIN—				
Orangeville	30.05	76	97.6	49
DURHAM—				
Port Hope	23.56	77	93 7	34
ESSEX—				
Cottam	31.57	83	21.3	15
Windsor	29.41	94	45 8	23
ELGIN—				
Port Stanley	23.00	100	95 0	70
Cowal	18 82	44	31.5	17
FRONTENAC—				
Arden	30 32	116	64.0	33
Kingston	30 23	104	51 2	60
GREY—				
Owen Sound	26.58	103	141.7	71
Meaford	24.20	67	124.7	53
HALDIMAND—				
Cayuga	20.04	47	48.5	24
Dunnville	27 14	87	48.5	24
HALIBURTON—				
Haliburton	29.46	124	72 9	59
HALTON—				
Georgetown	26 39	103	93.8	73
HASTINGS—				
Deseronto	34.17	88	52.9	36
HURON—				
Goderich	17.39	43	87.5	35
Sunshine	19.33	74	99 4	57
KENT—				
Ridgetown	21 38	81	63.0	34
Dealtown	21.20	80	29.4	22
Chatham	18.48	70	69.5	29
LAMBTON—				
Wyoming	18.51	45	47.5	18
Birnam	23.70	65	99.5	43
Sarnia	11.63	27	36.5	11
LANARK—				
Montague	28.46	52	37.5	19
Kitely	25.14	61	53 8	36
LEEDS—				
Lansdowne	17.82	53	54.2	25
LENNOX—				
Parma	26.03	68	135.0	34
MIDDLESEX—				
London	15.10	80	95.4	58
Hubrey	24 96	70	47.0	25
MUSKOKA—				
Beatrice	31.72	84	99 0	47
Emsdale	29 95	106	91.1	56
Gravenhurst	29.18	85	88 8	58
NIPISSING—				
Haileybury	20 97	98	94.2	94
NORFOLK—				
Port Dover	18.79	78	96.7	38
Lynedoch	21 27	61	49.4	36
NORTHUMBERLAND—				
Wooler	26 29	79	52 0	24
ONTARIO—				
Uxbridge	23 14	68	85.2	37
OXFORD—				
Woodstock	26.13	61	67.2	30
Princeton	25 57	65	84.0	44
PARRY SOUND—				
Parry Sound	28.11	91	141.7	79
Uplands	21 75	85	149.3	60
PEEL—				
Alton	25 78	82	72.1	55
PERTH—				
Listowel	22 99	56	90.1	34
PETERBOROUGH—				
Jermyn	25.77	63	69 0	27
Peterborough	24.11	89	84.9	41
Lakefield	24.68	84	92 5	29
RAINY RIVER				
Rat Portage	13.29	56	52.0	35
RENFREW—				
Clontarf	28 04	92	139.2	64
Rockcliffe	19.49	79	72.7	67
SIMCOE—				
Barrie	22.15	92	157.5	56
Orillia	25.24	91	94.7	48
Midland	26.94	81	58 0	30
VICTORIA—				
Kinmount	24 80	86	76.4	38
Lindsay	24.72	103	122.0	51
WELLAND—				
Welland	18 60	83	159.1	51
WELLINGTON—				
Guelph	22.75	71	56 4	34
Erasmus	25 32	101	103.5	71
WENTWORTH—				
Stony Creek	29.85	76	54 1	23
YORK—				
Aurora	23 42	87	87.6	43
Scarboro'	23.63	77	52 3	36
Deer Park	23.71	83	56 9	27
Toronto	25.20	102	70.7	54
Agincourt	21.69	71	62 0	30
Average for the Province, 1901	24.12	79	76.3	43
1900	25.28	81	64.6	34
1882-1901	24.10	87	76 3	47

RAIN AND SNOW.

TABLE IV. Monthly summary of inches of rain and snow precipitation in the several districts of Ontario in 1901 ; also the average derived from the twenty years, 1882-1901.

Districts.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total for the year.
West and south west—		in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Rain	1901.....	0.78	R	1.72	1.85	2 59	1.76	3 06	1.98	2 48	1 22	1 59	2.21	21.24
	1882-01.....	1.19	1.36	1.29	1 79	3 30	2.97	2.60	2.48	2.55	2.73	2.45	1 58	26.29
Snow	1901	11.4	19 3	5 6	4.9	..	....	.	....	...	0 1	3.3	12 9	57.5
	1882-01.....	15.4	13 1	9.6	2 6	0.1	....	....	....	....	0.2	6.2	12.5	59.7
North west and north—														
Rain	1901	0.30	0 00	1.24	1 41	3.16	2 26	4.44	3.11	3.01	2.49	1.15	1.26	23.83
	1882-01.....	0.84	0 56	0 86	1.43	2 61	2 74	2.78	2.78	3.00	2 93	1 98	1.10	23.64
Snow	1901	24 4	15 3	19.8	1.7	....	....	....	....	....	1.0	13.1	15.1	91 4
	1882 01.....	27.1	20.9	14 6	3.5	0.3	....	....	....	....	1.6	13.3	21.4	102.7
Centre—														
Rain	1901.....	0.67	0.00	1.50	3 12	4 25	1 98	4.15	3.28	2.90	0.49	1.06	1.90	25 30
	1882-01.....	1.15	1.07	1.21	1 64	2 83	2.70	2 54	2.26	2.47	2 25	2.19	1 42	23 83
Snow	1901	18 3	19.7	16.4	8.0	....	....	....	....	....	0.3	5 0	13 9	81.6
	1882-01.....	17.5	15.2	10 6	3.0	0 1	....	....	....	....	0.4	6.0	11.5	64.3
East and north east—														
Rain	1901	0.55	0 00	1.93	2 68	4 37	2.55	3.95	2.76	2 74	1.05	1.21	2.03	25 82
	1882-01.....	0 92	0 67	1.03	1 38	2.76	2 68	2 86	2.54	2 49	2.18	1.88	1 23	22 62
Snow	1901	20.9	15 2	10 8	2.2	.	....	....	....	...	0.1	10.8	14 8	74.8
	1882-01.....	20.7	18.1	12.9	3.5	0.1	..	....	....	....	0.6	8.3	14 2	78.4
The Province—														
Rain ...	1901	0 58	R	1.60	2.26	3 67	2.14	3.90	2.78	2 78	1.31	1.25	1.85	24 12
	1882-01.....	1.03	0 91	1 10	1.56	2.88	2.77	2.69	2 52	2.63	2.55	2.18	1 33	24 10
Snow	1901...	18.8	17.6	13.1	4 2	..	....	....	....	...	0.4	8.0	14.2	76 3
	1882-01.....	20.2	16.8	11.9	3.2	0.1	....	....	....	...	0.7	8.5	14.9	76.3

SUNSHINE.

TABLE V. Monthly summary of bright sunshine at the principal stations in Ontario in 1901, showing the number of hours the sun was above the horizon, the hours of registered sunshine, the total for the year, and the average derived from the twenty years, 1882-1901.

Station.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.
Sun above horizon		285.7	291.4	369.9	406.4	461.1	465 7	470.9	434.5	376.3	340.2	286.9	274.3	4463.3
Woodstock	1901.....	37.9	81 9	67 9	152.3	170.1	266 7	291.1	206 9	187 8	169.0	89 8	58.0	1779.4
	1882-01..	60.5	84.4	125.7	181.6	203.6	246.5	275.5	235.7	184.2	134 8	68.5	54.7	1855.7
Toronto	1901.....	71 6	136 3	114.8	157 6	171 3	288 2	271.8	216.2	207 .6	182 1	83.5	80.6	1981.6
	1882-01..	78.0	103.2	156.4	199 2	218.4	265.9	284.2	251.7	212.6	147.8	77.8	62.9	2058.1
Barrie.....	1901.....	43.0	110.7	105 9	156.5	185.6	265 6	272.5	211.5	204 8	150.4	73 7	47.8	1828.0
	1882-01..	53.8	77.6	140 6	183.2	202.3	239.4	264.5	225.7	177.5	115.0	52 1	41.2	1772.9
Lindsay	1901.....	63 9	137.3	115 4	161 2	177 5	244 3	251 0	205.9	205 2	147 3	85 4	61.2	1855.6
	1882-01..	74.4	102.9	161.1	205.1	217 7	258.3	269.2	247 1	199.2	136 6	68 1	56.6	1996 3
Kingston	1901.....	81.9	112 4	80.3	144.7	182.1	267 6	254.6	199.5	193.1	166.3	69.1	66.8	1818.4
	1882-01..	77.0	106.5	159.9	196.0	217.4	253.7	269.7	243.8	193.4	139.7	73.9	68 8	1999.8
Average of five stations	1901.....	59.7	115 7	96.9	154.5	177 3	266 5	268 2	208.0	190.7	163 0	80.3	62.9	1852 7
	1900.....	77 1	109 8	161.4	214.0	247 .9	305 3	266.3	271.4	190 0	164.0	82 4	46 6	2136 2
	1882-01..	68.7	94.9	148 7	193.0	211 .9	252.8	272.6	240.8	193.4	134.8	68.1	56.8	1936.5

TORONTO OBSERVATORY REGISTER.

TABLE VI. Comparative Meterological Register for the seven years, 1895-1901, at Toronto Observatory in Lat. 43° 39.4′ N., and Long. 5 hrs. 17 m. 34.65s. W. Height above the sea 350 feet.

	1901.	1900.	1899.	1898.	1897.	1896.	1895.
Average temperature	45.55	46.89	45 83	47 15	45.93	45.36	44.28
Difference from average (61 years)	+1 18	+2.52	+1.46	+2 78	+1 56	+0.99	−0 09
Thermic anomaly (lat. 40° 40′)	−5.47	−4.13	−5.19	−3.87	−5.09	−5.66	−6.74
Highest temperature	97.1	98 0	93 1	97 1	93.3	91.3	93.4
Lowest temperature	−10 9	− 9.6	−12 0	−15 0	− 7 2	−17.9	−21.2
Monthly and annual ranges	108.0	107 6	104.1	112.1	100.5	109.2	114.6
Average daily range	16 90	16 70	17 51	17.48	16.21	17.58	17 26
Greatest daily range	43.0	37 6	35.0	34:4	36.0	38.9	36.9
Average height of barometer at 32° Fahr	29.5988	29.6213	29.6368	29.6216	29.6319	29.6382	29.6171
Difference from average (60 years)	− .0211	+ .0014	+ .0169	+ 0017	+ .0120	+ .0183	− .0028
Highest barometer	30 328	30.224	30.403	30 218	30.353	30 422	30.240
Lowest barometer	28 868	28.802	28.657	28.730	28.779	28.734	28.746
Monthly and annual ranges	1.460	1 422	1.746	1.486	1.574	1.688	1.494
Average humidity of the air	77	76	76	76	76	75	75
Difference from average	+ 1	0	0	0	0	− 1	− 1
Average elasticity of aqueous vapour	0.291	0 295	0.279	0.289	0 274	0.254	0.253
Average temperature of dew point	44.3	44 6	43.1	44 1	42.7	38.9	41 3
Average of cloudiness	0 61	0.57	0.56	0.58	0 61	0.60	0.57
Difference from average (47 years)	.00	− .04	− .05	− .03	.00	− .01	− 04
Resultant direction of wind	N 55° W	S 88° W	S 77° W	N 65° W	N 89° W	N 88° W	S 78° W
Resultant velocity of wind	2.99	3.09	2 66	1.78	2 42	0.75	1.36
Average velocity (miles per hour)	10.26	10.67	10 14	10.12	12 33	8.44	5.60
Highest velocity in month and year	45.0	44.0	50.0	55.0	51.0	50 0	60.0
Total amount of rain in inches	25.200	22.130	25.795	23.800	27 737	21.770	22 532
Difference from average (61 years)	−1 866	−4 936	−1.271	−3 266	+0 671	−5 296	−4.534
Number of days of rain	102	99	105	98	110	104	101
Total amount of snow in inches	70.7	74 6	31.8	71 3	47.4	73.3	54.8
Difference from average (61 years)	+ 3.15	+ 7 05	−35.75	+ 3 75	−20.15	+ 5.75	−12 75
Number of days of snow	54	42	40	53	43	43	48
Number of fair days	183	187	185	196	173	174	196
Number of days completely clouded	58	51	44	56	58	55	48
Number of auroras observed	2	3	10	7	3	18	11
Possible to see aurora (No. of nights)	201	224	226	210	179	194	195
Number of hours bright sunshine	1981 6	2305.0	2148.2	2128 9	1987 6	2146 7	2159.7
Number of hours of possible sunshine	4463 3	4463.3	4463 3	4463 3	4463.3	4474.4	4463.3

RURAL AREAS ASSESSED.

TABLE VII. Showing by County Municipalities the rural area of Ontario as returned by Municipal assessors for 1901; also the comparative totals for the Province for the ten years 1892-1901.

Counties and districts.	Acres of assessed land.			Acres cleared.	Acres woodland.	Acres in swamp, marsh or waste land.	Per cent. cleared.
	Resident.	Non-resident.	Total.				
Algoma	327,046	92,424	419,470	39,320	328,205	51,945	9.2
Brant	211,777	3,909	215,686	179,578	14,960	21,148	83.3
Bruce	845,403	71,275	916,678	535,287	181,796	199,595	58.4
Carleton	560,635	3,778	564,413	308,244	84,808	171,271	54.6
Dufferin	352,172	3,369	355,541	246,814	42,087	66,640	69.4
Dundas	236,106	650	236,756	156,654	41,561	38,541	66.2
Durham	366,955	4,981	371,936	295,083	36,544	40,309	79.3
Elgin	435,732	105	435,837	331,118	96,648	8,071	76.0
Essex	426,826	4,112	430,938	285,223	134,386	11,329	66.2
Frontenac	629,147	61,261	690,408	265,811	234,000	190,597	38.5
Glengarry	288 617	817	289,434	185,344	87,847	16,243	64 0
Grenville	263,047	8,334	271,381	172,499	44,897	53,985	63.6
Grey	1,059,707	4,772	1,064,479	659,244	186,827	218,408	61.9
Haldimand	278, 273	1,736	280,009	230,445	46,134	3,430	82.3
Haliburton	552,846	10,367	563,213	37 814	326,008	199,391	6.7
Halton	224,794	773	225,567	172,513	33,635	19,389	76.5
Hastings	949,099	87,026	1.036,125	403,925	465,969	166,231	39.0
Hnron	796,624	1 900	798,524	631,985	83,957	82,582	79.1
Kent	556,744	7,937	564,684	431,767	114,806	18,111	76.5
Lambton	654,957	3,751	658,708	407,962	213,008	37,738	61.9
Lanark	646,498	25,925	672,423	318,393	192,908	161,117	47 4
Leeds	467,241	3,331	470,572	283,011	126,676	60,885	60.1
Lennox & Addington	431,984	7,527	439,511	282,796	93,800	62,915	64.4
Lincoln	184,366	7,239	191,599	164,117	26,439	1,043	85.7
Manitoulin	209,524	15,042	224,566	41,074	111,131	72,361	18.3
Middlesex	749,037	8,864	757,901	591,176	155,574	11,151	78.0
Muskoka	508,902	35,912	544 814	61,808	395,517	87,489	11.3
Nipissing	252,094	53,169	305,263	20,090	222,325	53,848	9.5
Norfolk	396,362	2,658	399,020	261,253	107,123	30,644	65.5
Northumberland	433,605	1,320	434,925	341,591	46,879	46,455	78.5
Ontario	493,668	6,962	500,630	360,391	43,029	97,210	72.0
Oxford	471,732	276	472,008	381,399	66,405	24,204	80.8
Parry Sound	524,956	46,228	571,184	65,778	410,658	94,748	11.5
Peel	284,475	3,902	288,377	253,787	20,491	14,099	88.0
Perth	517,431	2,388	519,819	425,909	46,418	47,492	81.9
Peterborough	551,396	19,960	571,356	247,499	198,243	125,614	43.3
Prescott	288,520	3,244	291,764	168,817	111,783	11,164	57.9
Prince Edward	222,823	9,292	232,115	193,886	23,833	14,396	83 5
Rainy River	74,921	14 131	89,052	5,387	79,803	3,262	6.7
Renfrew	934,308	48,254	982,562	305,331	452,151	225,080	31 1
Russell	234,184	17,869	252,053	102,159	149,229	665	40.5
Simcoe	942,933	22,579	965,512	596,893	247,164	121,455	61.8
Stormont	216,166	2,721	248,887	143,322	88,207	17,268	57.6
Thunder Bay	192,002	58,548	250,550	5,522	159,503	85 525	2.1
Victoria	556 235	43,054	599 289	275,077	124 424	199,788	45.9
Waterloo	303,909	2,907	306,816	249,598	36,037	21,181	81.3
Welland	219,945	7,769	227,714	181,899	40,783	5,032	79.9
Wellington	627,018	772	627 790	475,625	62,961	89,204	75 8
Wentworth	265,771	6,532	272,303	214,393	33,733	24.177	78.7
York	533,260	2,756	5 6,016	432,236	44,382	59,398	80.6
The Province:							
1901	22,781,710	854,468	23,636,178	13,436,482	6,716,872	3,483,824	56.8
1900	22,728,082	840,022	23,568,104	13,297,206	7,127,363	3,143,535	56.4
189	22,670,958	780,134	23,451,092	13,111,292	7,149,404	3,190 396	55.9
	22,492,858	899,746	23,392,584	12,993,614	7,198,905	3,200,065	55.5
	22,403,060	957,368	23,360,428	12,853,081	7,294,026	3,213,321	55.0
	22,174,899	947,509	23,172,408	12,671,851	7,264,167	3,236,390	54.7
	22,131,895	981,420	23,113,315	12,426,992	7,777,451	2,908,872	53 8
894	22,032,799	1,006,175	23,038.974	12,292,610	7,859,714	2,886,650	53.4
11893	21,940,726	1,018,554	22,959.280	12,131,564	8,133,229	2,694,487	52 8
892	21,923,424	962.040	22,885,464	11,990,140	8.264.881	2,630,443	52.4

FALL WHEAT AND SPRING WHEAT.

TABLE VIII. Showing by County Municipalities of Ontario the area, produce and market value of the crops of Fall Wheat and Spring Wheat for the year 1901, together with the totals for the Province for the past ten years and the average for the twenty years 1882-1901; also the averages per acre.

Counties and districts.	Fall wheat. Acres.	Bushels.	Yield per acre.	Market value.	Market value per acre.	Spring wheat. Acres.	Bushels.	Yield per acre.	Market value.	Market value per acre.
				$	$ c.				$	$ c.
*Algoma	258	6,450	25 0	4,263	16 52	2,257	41,980	18.6	28,043	12 42
Brant	28,259	361,715	12 8	239,094	8 46	413	7,021	17.0	4,690	11 36
Bruce	38,664	912,470	23 6	603,143	15 60	3,767	47,464	12.6	31,706	8 42
Carleton	417	10,008	24 0	6,615	15 86	12,580	212,602	16.9	142,018	11 29
Dufferin	7,418	171,356	23 1	113,266	15 27	10,791	152,153	14.1	101,648	9 42
Dundas	144	3,096	21.5	2,046	14 21	2,080	38,688	18.6	25,844	12 42
Durham	6,653	124,081	18 5	81,357	12 23	19,255	284,974	14 8	190,363	9 89
Elgin	35,752	493,378	13.8	326,124	9 12	34	680	20 0	454	13 36
Essex	26,200	500,420	19 1	330,778	12 63	339	6,780	20 0	4,529	13 36
Frontenac	997	18,744	18.8	12,390	12 43	8,686	119,867	13 8	80,071	9 22
Glengarry	26	567	21.8	375	14 41	6,099	118,321	19 4	79,038	12 96
Grenville	149	2,682	18 0	1,773	11 90	2,538	36 293	14.3	24,244	9 55
Grey	31,875	828,750	26 0	547,804	17 19	10,126	147,840	14.6	98,757	9 75
Haldimand	36,480	339,264	9.3	224,253	6 15	1,718	14,088	8.2	9,411	5 48
Haliburton	230	4,232	18.4	2,797	12 16	1,142	15,988	14.0	10,680	9 35
Halton	24,706	370,590	15 0	244,960	9 91	4,081	55,502	13.6	37,075	9 08
Hastings	7,652	145,388	19 0	96,10	12 56	17,263	245,134	14.2	163,749	9 49
Huron	60,992	1,207,642	19.8	798,251	13 09	1,911	26,563	13.9	17,744	9 29
Kent	56,455	942,798	16.7	623,189	11 04	431	5,603	13 0	3,743	8 68
Lambton	46,313	676,170	14 6	446,948	9 65	864	11,923	13.8	7,958	9 22
Lanark	1,893	32,560	17.2	21,522	11 37	12,909	180,726	14.0	120,725	9 35
Leeds	3,326	57,872	17.4	38,253	11 50	4,676	63,594	13.6	42,481	9 08
Lennox & Ad.	2,085	35,654	17.1	23,567	11 30	9,187	124,025	13.5	82,849	9 02
Lincoln	20,300	158,340	7.8	104,683	5 16	832	6,240	7.5	4,168	5 01
Manitoulin	456	10,032	22.0	6,631	14 54	2,293	39,440	17.2	26,346	11 49
Middlesex	59,922	790,970	13.2	522,831	8 73	643	8,873	13 8	5,927	9 22
Muskoka	132	2,178	16.5	1,440	10 91	1,108	17,950	16.2	11,991	10 82
Nipissing	111	2,997	27.0	1,981	17 85	922	17,702	19 2	11,825	12 83
Norfolk	33,305	273,101	8.2	180,520	5 42	175	2 625	15.0	1,753	10 02
Northumb'lnd	13,672	250,198	18 3	165,381	12 10	23,959	335,426	14 0	224,064	9 35
Ontario	12,982	275,218	21.2	181,919	14 01	30,131	533,319	17.7	356,257	11 82
Oxford	40,224	639,562	15.9	422,751	10 51	589	7,421	12 6	4,957	8 42
Parry Sound	45	810	18.0	536	11 90	1,610	25 760	16.0	17,208	10 69
Peel	22,973	379,055	16.5	250,555	10 91	11,875	167,438	14 1	111,849	9 42
Perth	47,150	1 178,750	25 0	779,154	16 52	1,274	20,639	16 2	13,787	10 82
Peterborough	9,409	209,821	22.3	138,692	14 74	11,523	159,017	13.8	106,223	9 22
Prescott	21	357	17.0	236	11 24	6,244	107,397	17.2	71,741	11 49
Prince Edw'rd	5,960	94,168	15 8	62,245	10 44	9,793	127,309	13.0	85,042	8 68
Renfrew	346	6,989	20.2	4 620	13 35	29,561	481,844	16.3	321,872	10 89
Russell	71	1,775	25 0	1,173	16 52	2,429	43,479	17.9	29,014	11 96
Simcoe	70,963	1,688,919	23.8	1,116,375	15 73	18,885	271,944	14.4	181,658	9 62
Stormont	258	3 947	15.3	2,609	10 11	3,144	47,160	15.0	31,503	10 02
Victoria	5,001	117,524	23 5	77,683	15 53	23,068	364,474	15.8	243,469	10 55
Waterloo	43 725	896 362	20 5	592,495	13 55	547	9,080	16.6	6,065	11 09
Welland	23,622	259,842	11.0	171,755	7 27	445	3,783	8.5	2,527	5 68
Wellington	18,751	401,271	21.4	265,240	14 15	7,619	123,914	16.2	82,774	10 82
Wentworth	29,610	343,476	11 6	227,038	7 67	1,951	19 315	9.9	12,902	6 61
York	35,634	712,680	20.0	471,081	13 22	34,251	599,393	17.5	400,394	11 69
The Province:										
1901	911,587	15,943 229	17 4	10,538,474	11 56	358,048	5,498,751	15 4	3,673,166	10 26
1900	1,068,640	23,369,737	21 9	15,517,505	14 52	376,903	6,940 333	18.4	4,681 725	12 43
1899	1,049,691	14,439,827	13 8	9,631,365	9 18	398 726	7,041.317	17 7	4,682,476	11 74
1898	1,048,182	25,158,713	24.0	17,460,147	16 66	389 205	6,873,785	17.7	3,756,659	12 22
1897	959,222	23,988,051	25 2	18,758,656	19 74	323,305	4,868,101	15 1	3,826,327	11 84
1896	876,955	15.078,441	17.2	10,705,693	12 21	255,361	3,519,322	13.3	2,484,641	9 73
1895	743 199	14,155,282	19.0	9,809,610	13 20	233,957	3,472,543	15 5	2,423,835	10 82
1894	778,992	16,512,106	21 2	9,081,658	11 66	230,016	3,367,854	14.6	1,869,159	8 13
1893	913,954	17,545,248	19.2	10,509,604	11 50	356,721	4,186,063	11.7	2,486,521	6 97
1892	965,532	20,492,497	21 2	14,488,195	14 99	651,302	8,290,395	12 7	5,620,888	8 63
1882-1901	916,820	18,363,774	20 0	14,450,487	15 76	459,951	7 144,122	15 5	5,805 073	12 62

* Including Rainy River and Thunder Bay in this and succeeding tables.

BARLEY AND OATS.

TABLE IX. Showing by County Municipalities of Ontario, the area, produce and market value of the crops of Barley and Oats for the year 1901, together with the totals for the Province for the past ten years and the average for the twenty years, 1882-1901 ; also the averages per acre.

Counties and districts.	Barley.					Oats.				
	Acres.	Bushels.	Yield per acre.	Market value.	Market value per acre.	Acres.	Bushels	Yield per acre.	Market value.	Market value per acre.
				$	$ c.				$	$ c.
Algoma	1,429	42,870	30.0	19,291	13 50	9,669	377,091	39.0	136,507	14 12
Brant	13,617	349,957	25.7	157,481	11 57	23,467	768,131	33 3	258,063	12 05
Bruce	16,366	402,604	24.6	181,172	11 07	94,190	2,929,340	31 1	1,060,421	11 26
Carleton	9,053	222,704	24 6	100,217	11 07	75,075	2,252,250	30.0	815,314	10 86
Dufferin	15 046	413,765	27.5	186,194	12 37	65,598	2,243,452	34.2	812,130	12 38
Dundas	2,909	75,925	26 1	34,166	11 74	33,781	1,023,564	30.3	370,530	10 97
Durham	28,555	719,586	25 2	323,814	11 34	47,315	1,585,053	33 5	573,789	12 13
Elgin	11,458	308,220	26 9	138 699	12 10	47,054	1,609,247	34.2	582,547	12 38
Essex	10,381	280,287	27 0	126,129	12 15	52,426	1,924,034	36.7	696,500	13 29
Frontenac	5,815	112,230	19.3	50,503	8 69	43,535	1,114,496	25.6	403,447	9 27
Glengarry	4,386	108,773	24 8	48,948	11 16	41,796	1,274,778	30.5	461.470	11 04
Grenville	2,872	64,620	22 5	29,079	10 13	32,443	681,303	21.0	246,632	7 60
Grey	22,935	582,549	25 4	262,147	11 43	138,080	4,225,248	30.6	1,529,540	11 08
Haldimand	7,250	129,060	17.8	58,072	8 01	32,400	942 840	29.1	341,308	10 53
Haliburton	409	8,916	21.8	4,012	9 81	6 309	162,772	25 8	58 924	9 34
Halton	8,809	221,987	25.2	99,894	11 34	22,450	707,175	31.5	255,998	11 40
Hastings	23,350	558,065	23.9	251,129	10 76	63,747	1,727,544	27.1	625,371	9 81
Huron	29,354	792,558	27.0	356,651	12 15	122,046	4,210,587	34 5	1,524,233	12 49
Kent	18,131	534,865	29.5	240 689	13 28	51,846	2,115,317	40.8	765.745	14 77
Lambton	20,021	548 575	27 4	246,859	12 33	71,913	2,596,079	36.1	939,773	13 07
Lanark	4,092	96 162	23.5	43 273	10 57	44,148	1,214,070	27.5	439,493	9 95
Leeds	4,352	92,698	21.3	41,714	9 58	45,886	1,248,089	27.2	451,813	9 85
Lennox & Ad.	19,809	457,677	23.0	205,955	10 35	41,559	1,047,287	25.2	379,118	9 12
Lincoln	2,033	31.308	15.4	14,089	6 93	21,361	566,067	26 5	204 916	9 59
Manitoulin	889	27,559	31.0	12,401	13 95	5,183	187,106	36 1	67,732	13 07
Middlesex	21,518	602 404	28.0	271,082	12 60	92,282	3,322,152	36 0	1,202,619	13 03
Muskoka	857	19,711	23.0	8,870	10 35	11.528	327.395	28.4	118.517	10 28
Nipissing	337	9 099	27.0	4,095	12 15	4 622	153.913	33.3	55.716	12 05
Norfolk	6,692	124,471	18.6	56 012	8 37	32,311	823,931	25 5	298,263	9 23
Northumb'rld	17,683	429,697	24 3	193,364	10 93	46,616	1,398,480	30 0	506,250	10 86
Ontario	29,793	846,121	28.4	380.754	12 78	76,141	2 870,516	37 7	1,039,127	13 65
Oxford	18,559	532,069	28.7	239,431	12 91	74 795	2,782,374	37 2	1,007,219	13 47
Parry Sound	1,022	24,119	23 6	10,854	10 62	12,898	380 491	29 5	137,738	10 68
Peel	28,469	760,122	26.7	342,055	12 01	40,837	1,461,965	35.8	529,231	12 96
Perth	23,415	709,475	30 3	319,264	13 63	98,314	3,893,234	39 6	1,409,351	14 34
Peterborough	8,533	206,399	24 2	92,925	10 89	41,273	1,234,063	29 9	446,731	10 82
Prescott	2,722	63,423	23.3	28,540	10 48	37,700	1,006,590	26.7	364,386	9 67
Prince Edward	15,179	323, 13	21.3	145,491	9 58	18,560	488,128	26 3	176,702	9 52
Renfrew	2,787	56,019	20 1	25,208	9 01	49,642	1,280,764	25.8	463,636	9 34
Russell	2,729	57,582	21.1	25,912	9 49	23,564	582,031	24 7	210,695	8 94
Simcoe	43,460	1,186,458	27 3	533,906	12 28	96,291	3,167,974	32.9	1,146,807	11 91
Stormont	3,352	81,118	24 2	36 503	10 89	27,736	851,495	30.7	308 241	11 11
Victoria	16,148	403,7 0	25.0	181,665	11 25	62,084	1,881,145	30 3	680,975	10 97
Waterloo	19,759	574 987	29 1	258,744	13 09	58,443	2,039 661	34 9	738 357	12 63
Welland	2,103	39,116	18 6	17,602	8 37	24,357	660,075	27 1	238,947	9 81
Wellington	33,693	1,000,682	29 7	450,307	13 36	122,836	4,274,693	34.8	1,547,439	12 60
Wentworth	10,268	250,905	24.2	112,908	10 89	33,810	1,152,921	34.1	417,357	12 34
York	41,632	1,276,475	28.6	574,414	12 87	88,746	3,567,589	40.2	1,291,467	14 55
The Province:										
1901	637,201	16,761,076	26.3	7,542 484	11 84	2,408,264	78,334,490	32 5	28,357,085	11 77
1900	577,810	16,909,751	29 3	6,577,893	11 38	2,398,834	89 693,327	37.4	23,768,732	9 91
1899	490,374	14 830,891	30 2	5,858,102	11 95	2,363,778	89,897,724	38 0	24,901,670	10 53
1898	438,784	12,663,688	28 9	4,812,194	10 97	2,376,360	86,858 293	36 6	22,409,440	9 43
1897	451,615	12,021,779	26 6	3,245,880	7 19	2,432,491	86 318,128	35.5	19,502,897	8 02
1896	462,792	12,669,744	27 4	4,003,638	8 65	2,425,107	82,979,992	34 2	16,595,998	6 84
1895	478,046	12 090,507	25.3	4,884,565	10 22	2,373,309	84,497,566	35 7	24,646,992	10 39
1894	486,261	10,989,404	22.6	4,447,064	9 15	2,342,766	70,172,516	30 0	21,613,135	9 23
1893	467,315	9,806,088	21.0	3,932,241	8 41	1,936,644	58,784,529	30.3	19,450,064	10.04
1892	499,225	12,274,318	24 6	5,069,293	10 15	1,861,469	64,758,053	34 8	19,945,480	10 71
1882-1901	621,089	16,225,087	26.1	7,792,218	12 55	1,977,553	68,820,032	34.8	21,568,571	10 91

PEAS AND BEANS.

TABLE X. Showing by County Municipalities of Ontario, the area, produce and market value of the crops of Peas and Beans for the year 1901, together with the totals for the Province for the past ten years and the average for the twenty years, 1882-1901, also the averages per acre.

Counties and districts.	Peas.					Beans.				
	Acres.	Bushels.	Yield per acre.	Market value.	Market value per acre.	Acres.	Bushels.	Yield per acre.	Market value.	Market value per acre.
				$	$ c.				$	$ c.
Algoma	2 697	59,334	22.0	34,745	14 37	15	225	15 0	281	18 75
Brant	5,785	67,102	11 6	43,820	7 57	329	4,869	14.8	6,086	18 50
Bruce	52,452	1,057,078	19 2	657,622	12 54	33	561	17.0	701	21 25
Carleton	5,138	83,236	16 2	54,353	10 58	190	3,952	20.8	4,940	26 00
Dufferin	13,591	239,202	17 6	156,199	11 49	49	980	20.0	1,225	25 00
Dundas	1 088	19,693	18.1	12,860	11 82	164	2,755	16.8	3,444	21 00
Durham	27,975	469,980	16 8	306 897	10 97	3 6	5,372	17 0	6,715	21 25
Elgin	5,242	71,019	13.6	46 375	8 88	4,915	89,945	18.3	112,431	22 88
Essex	2,932	56,294	19.2	36 760	12 54	793	14 908	18.8	18,635	23 50
Frontenac	5,278	63,864	12.1	41,703	7 90	238	4,046	17.0	5,058	21 25
Glengarry	2,890	49,130	17 0	32,082	11 10	113	2,260	20 0	2,825	25 00
Grenville	885	18,320	20.7	11,963	13 52	56	924	16.5	1,155	20 63
Grey	52,135	865,441	16.6	565,143	10 84	322	5,216	16 2	6,520	20 25
Haldimand	13,232	222,298	16.8	145,161	10 97	119	1,547	13.0	1,934	16 25
Haliburton	1,476	18,450	12 5	12,048	8 16	7	112	16 0	140	20 00
Halton	8,908	122,040	13.7	79,692	8 95	61	976	16.0	1,220	20 00
Hastings	14,507	192,943	13.3	125,992	8 68	401	6,015	15.0	7,519	18 75
Huron	35,569	594,002	16.7	387,883	10 91	240	4,800	20 0	6,000	25 00
Kent	3,353	57,336	17.1	37,440	11 17	37,145	531,174	14 3	663,968	17 88
Lambton	6,410	103,201	16 1	67,390	10 51	986	18,537	18.8	23,171	23 50
Lanark	8,829	141,264	16 0	92,245	10 45	115	2,070	18.0	2,588	22 50
Leeds	2,5 4	43,570	17.4	28,451	11 36	292	5,840	20.0	7,300	25 00
Lennox & Add.	9,981	134,744	13.5	87,988	8 82	254	4,064	16 0	5,080	20 00
Lincoln	5,777	87,810	15 2	57,340	9 93	206	3,296	16.0	4,120	20 00
Manitoulin	4,353	86,189	19 8	56,281	12 93	10	150	15.0	187	18 75
Middlesex	11,310	179,829	15.9	117,428	10 38	814	16,117	19.8	20,146	24 75
Muskoka	3,097	55,746	18.0	36 402	11 75	9	149	16 6	186	20 75
Nipissing	1,438	30,917	21 5	20,189	14 04	3	45	15 0	56	18 75
Norfolk	4,741	53,705	11.4	35,069	7 44	1,146	20,628	18.0	25,785	22 50
Northumb'rl'nd	24,933	384 892	15.4	251,335	10 06	663	11,138	16.8	13,923	21 00
Ontario	20,515	379 528	18 5	247,832	12 08	170	2,720	16 0	3,400	20 00
Oxford	6,859	117,975	17 2	77,038	11 23	431	9,353	21.7	11,691	27 13
Parry Sound	3,428	73,018	21.3	47,679	13 91	49	980	20 0	1,225	25 00
Peel	9 510	158,817	16 7	103,708	10 91	99	1,386	14.0	1,733	17 50
Perth	22,186	479,266	21.7	312,961	14 17	11	220	20 0	275	25 00
Peterborough	19,785	348,216	17 6	227,385	11 49	67	958	14.3	1,198	17 88
Prescott	2,644	44,778	17.0	29,240	11 10	225	4,118	18.3	5,147	22 88
Prince Edward	9,945	141,219	14.2	92,216	9 27	430	7,095	16.5	8,869	20 63
Renfrew	21,920	271,808	12.4	177,491	8 10	258	3,173	12.3	3,966	15 38
Russell	1,356	22,374	16 5	14,610	10 77	118	2,183	18 5	2,729	23 13
Simcoe	53 591	921,765	17.2	601,913	11 23	110	1,892	17 2	2,365	21 50
Stormont	1,245	21,663	17 4	14,146	11 36	78	1,560	20.0	1,950	25 00
Victoria	21,199	345,544	16 3	225,640	10 64	204	3,264	16.0	4,080	20 00
Waterloo	9 126	135 065	14 8	88,198	9 66	231	4.389	19.0	5,486	23 75
Welland	4,687	69,855	15 0	45,615	9 79	936	13,291	14 2	16,614	17 75
Wellington	32,547	585,846	18 0	382,557	11 75	10	190	19.0	237	23 75
Wentworth	8,369	131,393	15.7	85,800	10 25	68	1,088	16.0	1,360	20 00
York	15,436	262,412	17.0	171,355	11 10	189	3,591	19.0	4,489	23 75
The Province:										
1901	602,724	10,089,173	16.7	6,588,230	10 93	53,688	824,122	15.4	1,030,153	19 19
1900	661,592	14,058,198	21.2	8,027,231	12 13	44,053	820,373	18.6	817,912	18 57
1899	743,139	15,140,790	20 4	8,675,673	11 67	40,485	651,009	16 1	703,090	17 37
1898	865,951	13 521,263	15 6	7,058,099	8 15	45,220	759,657	16.8	831,760	11 76
1897	896 735	13,867,093	15.5	5,838,016	6 51	50,591	981,340	19.4	639,834	12 65
1896	829,601	17,493,148	21.1	7,696,985	9 28	68,369	1,197,535	17 5	819,114	11 9
1895	799,963	15,568,103	19.5	8,531,320	10 66	72,747	1,494,179	20 5	1,414,988	19 4
1894	785,007	14,022 888	17 9	7,516,268	9 57	59,281	827,514	14 0	913,575	15 4
1893	738,741	14,168,955	19 2	7,651,236	10 36	48,858	664,310	14.6	783,836	16 0
1892	774,732	14,494,430	18 7	8,551,714	11 04	33,249	535,931	16.1	529,506	15 9
1882-1901	719,390	14,075,531	19.6	8,093,491	11 25	38,927	672,495	17 3	681,734	17 51

RYE AND BUCKWHEAT.

TABLE XI. Showing by County Municipalities of Ontario, the area, produce and market value of the crops of Rye and Buckwheat for the year 1901, together with the totals for the Province for the past ten years, and the average for the twenty years, 1882-1901; also the averages per acre.

Counties and districts.	Rye.					Buckwheat.				
	Acres.	Bushels.	Yield per acre.	Market value.	Market value per acre.	Acres.	Bushels.	Yield per acre.	Market value.	Market value per acre.
				$	$ c.				$	$ c.
Algoma	152	2,736	18.0	1,349	8 87	84	2,100	25 0	1,016	12 10
Brant	3,215	53,691	16.7	26,470	8 23	1,452	28,759	19.8	13,915	9 58
Bruce	866	15,242	17.6	7,514	8 68	681	13,620	20.0	6,592	9 68
Carleton	727	11,777	16 2	5,806	7 99	3,252	59 512	18 3	28,804	8 86
Dufferin	4,442	93,726	21.1	46,207	10 40	733	18,325	25 0	8,869	12 10
Dundas	719	12,654	17.6	6,238	8 68	2,186	45,906	21 0	22,218	10 16
Durham	10,007	148,104	14.8	73,015	7 30	2,613	52,260	20.0	25,294	9 68
Elgin	2,722	46,546	17 1	22 947	8 43	3,541	69,788	19.7	33,763	9 53
Essex	1,610	27,370	17.0	13,493	8 38	692	13,840	20.0	6,699	9 68
Frontenac	4,765	71,952	15 1	35,472	7 44	1,464	25,766	17.6	12,471	8 52
Glengarry	307	7,675	25.0	3,784	12 33	1,231	33,237	27.0	16,087	13 07
Grenville	1,594	28,054	17.6	13,831	8 68	3,213	61,047	19.0	29,547	9 20
Grey	1,700	25,500	15.0	12,571	7 40	2,267	54,408	24.0	26,333	11 62
Haldimand	4,914	74,101	15.1	36,532	7 44	647	9,705	15 0	4,697	7 26
Haliburton	209	5,681	19.0	2,801	9 37	201	3,590	17 6	1,738	8 52
Halton	749	11,984	16.0	5,908	7 89	170	3,570	21.0	1,728	10 16
Hastings	11,636	188,503	16 2	92,932	7 99	4,313	78,497	18 2	37,993	8 81
Huron	1,433	24,934	17 4	12,293	8 58	820	17,712	21.6	8,573	10 45
Kent	654	12,818	19 6	6,319	9 66	853	15,354	18.0	7,431	8 71
Lambton	743	13,597	18 3	6,703	9 02	328	7,235	22 4	3,502	10 84
Lanark	1,341	27,625	20.6	13,619	10 16	3,219	59 457	18 3	28,777	8 86
Leeds	2,384	37,190	15.6	18,335	7 69	3,693	75,337	20.4	36,463	9 87
Lennox & Add.	6,485	101,815	15.7	50,196	7 74	3,507	70,140	20 0	33,948	9 68
Lincoln	2,583	38,487	14 9	18,974	7 35	433	7,664	17.7	3,709	8 57
Manitoulin	105	1,995	19 0	984	9 37	66	1,650	25 0	799	12 10
Middlesex	740	16,280	22.0	8,026	10 85	1,040	23,712	22 8	11,477	11 03
Muskoka	254	3,785	14.9	1,866	7 35	151	2,597	17 2	1,257	8 32
Nipissing	58	986	17 0	486	8 38	15	240	16 0	116	7 74
Norfolk	10,638	144,677	13 6	71,326	6 70	7,802	141,996	18 2	68,726	8 81
Northumberland	17,033	227,242	13 4	112,030	6 61	6,155	118,176	19.2	57,197	9 29
Ontario	6,799	121,702	17 9	59,999	8 82	3,804	79,884	21.0	38,664	10 16
Oxford	2,331	32,634	14 0	16,089	6 90	1,218	27,770	22 8	13,441	11 03
Parry Sound	330	5 775	17.5	2,847	8 63	109	2,289	21.0	1,108	10 16
Peel	7,010	129 685	18.5	63 935	9 12	914	14,624	16.0	7,078	7 74
Perth	123	2 460	20 0	1,213	9 86	193	3,860	20 0	1,868	9 68
Peterborough	4,741	84 390	17.8	41,604	8 78	1,839	34,757	18 9	16,822	9 15
Prescott	131	1,507	11.5	743	5 67	1,355	24,661	18.2	11,936	8 81
Prince Edward	12,380	181,986	14 7	89,719	7 25	4,853	78,133	16.1	37,816	7 79
Renfrew	3,672	65,558	18 1	32,320	8 92	789	12,782	16.2	6,186	7 84
Russell	186	3,162	17 0	1,559	8 38	767	13,806	18 0	6,682	8 71
Simcoe	6,967	114,259	16.4	56,329	8 09	4,988	104,748	21.0	50,698	10 16
Stormont	16	227	14.2	112	7 00	2,564	69,228	27.0	33,506	13 07
Victoria	3,862	59,475	15 4	29,321	7 59	2,305	50,710	22 0	24,544	10 65
Waterloo	1,900	35,150	18.5	17,329	9 12	412	12,360	30 0	5,982	14 52
Welland	2,329	38,196	16 4	18 831	8 09	1,671	26,402	15.8	12,779	7 65
Wellington	1,773	30,318	17 1	14 947	8 43	1,043	27,118	26 0	13,125	12 58
Wentworth	3,485	60,988	17 5	30,067	8 63	1,158	22,928	19 8	11,097	9 58
York	5,376	101,669	18 8	49,827	9 27	1,434	35,850	25.0	17,351	12 10
The Province:										
1901	158,276	2,545,268	16.1	1,254,817	7 93	88,266	1,757,071	19.9	850,422	9 63
1900	142,213	2,357,635	16 6	1,143,453	8 04	102 570	1,874,261	18.3	819,052	7 98
1899	137,824	2,284,846	16 6	1,142,423	8 29	132,082	2,203,299	16.7	1,002,501	7 59
1898	165 089	2,673 231	16.2	1,162,857	7 04	150,394	2,373,645	15.8	906,732	6 03
1897	187,785	3,382,005	18 0	1,275,016	6 79	151,669	3,464,186	22 8	1,039,256	6 85
1896	148,680	2,230,873	15.0	816 500	5 49	145,606	2,603,669	17 9	794,119	5 45
1895	120,350	1,900,117	15.8	866,453	7 20	135,262	2,791,749	20.6	1,027,364	7 60
894	90,144	1,386,606	15 4	612,880	6 80	145,268	2,534,335	17.4	993,450	6 84
893	68,486	9 4,771	14 5	472,516	6 90	134,828	1,380,466	17 8	995,031	7 44
1892	73,073	1,132,504	15.5	631,937	8 65	125,104	2,521,214	20 2	1,063,952	8 50
1882-1901	116,712	1,885,998	16 2	973,971	8 37	100,117	1,932,144	19.3	767,830	7 67

CORN.

TABLE XII. Showing by County Municipalities of Ontario, the area, produce and market value of the crops of corn for husking and for fodder for the year 1901, together with the totals for the Province for the past ten years, and the average for the ten years 1892-1901; also the averages per acre.

Counties and districts.	Corn for husking.					Corn for silo and fodder.				
	Acres.	Bushels.	Yield per acre.	Market value.	Market value per acre.	Acres.	Tons green.	Tons per acre.	Market value.	Market value per acre.
				$	$ c.				$	$ c.
Algoma	57	2,850	50.0	1,083	19 00	79	869	11.00	1,738	22 00
Brant	6,234	448,848	72.0	170,562	27 36	4,170	46,245	11.09	92,490	22 18
Bruce	980	73,500	75.0	27,930	28 50	3,345	39,404	11.78	78,808	23 56
Carleton	1,469	51,100	35.0	19,418	13 30	8,582	124,439	14 50	248,878	29 00
Dufferin	112	4,480	40 0	1,702	15 20	565	5,555	11.00	11,110	22 00
Dundas	3,135	206,910	66.0	78,626	25 08	7,849	107,060	13 64	214,120	27 28
Durham	2,180	163,500	75.0	62,130	28 50	4,086	42,413	10.38	84,826	20 76
Elgin	28,636	2,405,424	84.0	914,061	31 92	4,394	35,504	8.08	71,008	16 16
Essex	64,883	5,644,821	87.0	2,145,032	33 06	1,840	12,880	7.00	25,760	14 00
Frontenac	2,579	162,477	63 0	61,741	23 94	4 314	58,929	13.66	117,858	27 32
Glengarry	1,133	67,980	60.0	25,832	22 80	4,599	68,985	15.00	137,970	30 00
Grenville	3,391	2 7,716	76.0	97,932	28 88	6,778	99,365	14 66	198,730	29 32
Grey	766	32,938	43.0	12,517	16 34	4,362	51,908	11.90	103,816	23 80
Haldimand	3,522	239,496	68.0	91,009	25 84	2,258	19,916	8.82	39,832	17 64
Haliburton	141	6,345	45.0	2,411	17 10	144	2,016	14.00	4,032	28 00
Halton	1,253	112,770	90.0	42,853	34 20	3,677	38,094	10.36	76,188	20 72
Hastings	7,361	412,216	56 0	156,642	21 28	6,855	68,139	9.94	136,278	19 88
Huron	1,984	132,928	67.0	50,513	25 46	7,663	94,178	12 29	188,356	24 58
Kent	57,239	4,636,359	81.0	1,761,816	30 78	3,277	23,791	7 26	47,582	14 52
Lambton	19,088	1,584,304	83 0	602,036	31 54	3,829	31,781	8.30	63,562	16 60
Lanark	1,824	105,792	58.0	40,201	22 04	5,898	76,674	13 00	153,348	26 00
Leeds	5,895	442,125	75 0	168,008	28 50	7,646	102,303	13.38	204,606	26 76
Lennox & Add.	4,923	324,918	66 0	123,469	25 08	3,278	36,582	11.16	73,164	22 32
Lincoln	7,803	561,816	72.0	213,490	27 36	2,271	19,167	8.44	38,334	16 88
Manitoulin	67	3,350	50 0	1,273	19 00	212	2,296	10 83	4,592	24 66
Middlesex	19,151	1,512,929	79 0	574,913	30 02	8,665	93,322	10 77	186,644	21 54
Muskoka	198	8,514	43.0	3,235	16 34	219	2,300	10.50	4,600	21 00
Nipissing	52	1,560	30.0	593	11 40	20	120	6 00	240	12 00
Norfolk	21,593	1,468,324	68.0	557,963	25 84	3,900	36,543	9.37	73,086	18 74
Northumberland	5,122	338,052	66 0	128,460	25 08	5,058	60,696	12 00	121,392	24 00
Ontario	2,798	221,042	79.0	83,996	30 02	5,467	68,338	12.50	136,676	25 00
Oxford	13,012	949,876	73 0	360,953	27 74	9,475	107,352	11 33	214,704	22 66
Parry Sound	122	4,880	40.0	1,854	15 20	117	1,170	10.00	2,340	20 00
Peel	809	46,922	58.0	17,830	22 04	3,547	42,138	11.88	84,276	23 76
Perth	519	38,925	75.0	14,792	28 50	7,961	105,642	13.27	211,284	26 54
Peterborough	460	31,280	68 0	11,886	25 84	2,932	41,048	14 00	82,096	28 00
Prescott	2,517	188,775	75.0	71,734	28 50	1,830	24,248	13 25	48,496	26 50
Prince Edward	8,962	555,644	62.0	211,145	23 56	4,482	39,442	8.80	78,884	17 60
Renfrew	563	19,705	35.0	7,488	13 30	2,909	29,934	10.29	59,868	20 58
Russell	730	32,850	45 0	12,483	17 10	2,208	23,559	10.67	47,118	21 34
Simcoe	1,694	106,722	63.0	40,554	23 94	3,941	52,021	13.20	104,042	26 40
Stormont	1,845	99,630	54.0	37,859	20 52	4,942	70,819	14.33	141,638	28 66
Victoria	198	9,504	48.0	3,612	18 24	2,629	33,810	12 86	67,620	25 72
Waterloo	1,348	88,968	66.0	33,808	25 08	5,277	74,300	14.08	148,600	28 16
Welland	9,482	616,330	65.0	234 205	24 70	1,793	13,752	7 67	27,504	15 34
Wellington	308	17,864	58 0	6,788	22 04	4,875	58 988	12.10	117,976	24 20
Wentworth	4,376	328,200	75 0	124,716	28 50	5,361	55,969	12.44	111,938	20 88
York	1,418	66,646	47.0	25,326	17 86	8,413	115,510	13.73	231,020	27 46
The Province:										
1901	323,923	24,838,105	76.7	9,438,480	29 14	197,932	2,359,514	11.92	4,719,028	23 84
1900	330,772	27,093,561	81 9	8,588,659	25 97	179,798	2,147,532	11.94	4,295,064	23 89
1899	333,590	21,673,234	65.0	4,291,300	12 86	171,935	1,697,755	9.87	3,395,510	19 75
1898	339,748	23,442,593	70 9	4,711,961	14 25	189,948	2,128,073	11.20	4,256,146	22 41
1897	335,030	24,663,908	73 6	4,858,808	14 50	269,005	2,669,822	12 77	5,339 644	25 55
1896	317,667	24,071,364	75 8	4,717,987	14 85	178,962	1,948,780	10.89	3,897,560	21 78
1895	302,929	24,819,809	81.9	5,609,296	18 52	149,899	1,775.654	11.85	3,551,308	23 69
1894	267,348	16,275,352	60.9	4,247,867	15 89	111,361	1,049,765	9 43	2,099,530	18 85
1893	217.294	14,072,961	64.8	3,729,335	17 16	95,865	1,049,524	10 95	2,099,048	21 90
1892	181,463	11,229,498	61.9	2,953,358	16 28	91,403	948,907	10.38	1,897,814	20 76
1892-1901	*294,076	21,218,057	72.2	5,314,705	18.07	*157,611	1,777,533	11.28	3,555,065	22 56

*The combined average area for corn for the twenty years 1882-1901, is 323,783 acres, the average value of the produce for the same period being $6,287,192.

POTATOES AND CARROTS.

TABLE XIII. Showing by County Municipalities of Ontario, the area, produce and market value of the crops of Potatoes and Carrots for the year 1901, together with the totals for the Province for the past ten years and the average for the twenty years, 1882-1901 also the averages per acre.

Counties and districts.	Potatoes.					Carrots.				
	Acres.	Bushels.	Yield per acre.	Market value.	Market value per acre.	Acres.	Bushels.	Yield per acre.	Market value.	Market value per acre
				$	$ c.				$	$ c.
Algoma	1,050	137,550	131	58,596	55 81	61	18,300	300	2,287	37 50
Brant	2,261	293,930	130	125,214	55 38	130	50,050	385	6,256	48 13
Bruce	4,005	556,695	139	237,152	59 21	442	177,242	401	22,155	50 13
Carleton	5,031	523,224	104	224,893	44 30	213	76,254	358	9,532	44 75
Dufferin	2,982	432,390	145	184 98	61 77	199	71,640	360	8,955	45 00
Dundas	2,001	110,055	55	46,883	23 43	137	38,497	281	4,812	35 13
Durham	2,837	368,810	130	157,113	55 38	185	67,155	363	8,394	45 38
Elgin	2,909	305,445	105	130,119	44 73	150	55,950	373	6,994	46 63
Essex	3,493	209,580	60	89,281	25 56	174	32,712	188	4,089	23 50
Frontenac	3,917	329,028	84	140,166	35 78	225	56,250	250	7 031	31 25
Glengarry	2,495	234,530	94	99 9 0	40 04	144	43,200	300	5,400	37 50
Grenville	2,840	252,760	89	107,676	37 91	133	46 550	3 0	5 819	43 75
Grey	5,993	934,908	156	398,271	66 46	407	130,240	320	16 280	40 00
Haldimand	1,448	112,944	78	48.114	33 23	75	18,900	252	2,363	31 50
Haliburton	583	50,721	87	21,607	37 06	44	8,624	196	1,078	24 50
Halton	1,642	155,990	95	66,452	40 47	94	31,678	337	3,9 0	42 13
Hastings	5,425	721,525	133	307,370	56 66	390	119,340	306	14,917	38 25
Huron	4,236	593,040	140	252,635	59 64	307	109,292	356	13 662	44 50
Kent	3,497	241 293	69	102 791	29 39	113	29.719	263	3.715	32 88
Lambton	3,551	369,304	104	157,323	44 30	216	67,824	314	8,478	39 25
Lanark	2,856	334 152	117	142,349	49 84	129	42,699	331	5,338	41 38
Leeds	3,086	330,202	107	140,666	45 58	181	49,282	272	6,154	34 00
Lennox & Add	4,029	447.219	111	190,515	47 29	181	47,965	265	5,996	33 13
Lincoln	1,937	180,141	93	76,740	39 62	95	34,010	358	4,251	44 75
Manitoulin	548	90,420	165	38,519	70 29	48	14 400	300	1,800	37 50
Middlesex	5,699	626,890	110	267,055	46 86	283	93,673	331	11,709	41 38
Muskoka	1,170	177,840	152	75,760	64 75	75	16,875	225	2,109	28 13
Nipissing	781	135,113	173	57,558	73 70	15	4,500	300	564	37 50
Norfolk	3,664	257,376	84	109 612	35 78	297	86,724	292	10,840	36 50
Northumberland	5,123	691,605	135	294 624	57 51	430	182 320	424	22 790	53 00
Ontario	4,445	582 295	131	248.058	55 81	252	111 384	442	13,923	55 25
Oxford	3,037	403,921	133	172,070	56 66	114	37,506	329	4,688	41 13
Parry Sound	1,179	199,251	169	84,881	71 99	83	31,623	381	3,953	47 63
Peel	3,690	332,100	90	141,475	38 34	242	105,996	438	13,250	54 75
Perth	3,179	521,356	164	222,098	69 86	198	65,538	331	8,192	41 38
Peterborough	2,748	385,9 6	142	164,417	60 49	304	146,168	484	18 271	60 50
Prescott	2 116	260 268	123	110,874	52 40	130	35,360	272	4,420	34 00
Prince Edward	2,122	220.688	104	94,013	44 30	103	30,900	300	3,863	37 50
Renfrew	3,593	377,265	105	160,715	44 73	137	23,838	174	2,980	21 75
Russell	1,138	97,868	86	41,692	36 64	74	22,200	300	2,775	37 50
Simcoe	7,953	1,169,091	147	498 033	62 62	497	164.507	331	20,563	41 38
Stormont	2,079	247,401	119	105,393	50 69	205	56,785	277	7 098	34 63
Victoria	3,031	409,185	135	174,318	57 51	188	84 788	451	10.589	56 38
Waterloo	3,141	442,881	141	188,667	60 07	289	130 050	450	16 256	56 25
Welland	2,560	207,360	81	88 335	34 51	53	10,759	203	1,345	25 38
Wellington	5,540	819,920	148	349,286	63 05	247	99,788	404	12,473	50 50
Wentworth	3,457	383,727	111	163,468	47 29	138	51,474	373	6,434	46 63
York	8,688	851,424	98	362,707	41 75	396	169,488	428	21,186	53 50
The Province:										
1901	154,155	18,116,637	118	7,717,687	50 06	9,221	3,199,967	347	399,996	43 38
1900	163,754	21,476,439	131	5,605,351	34 23	10 320	3,469,123	336	4 43 640	42 02
1899	168,148	19,933 366	119	6,538.14	38 88	11,891	3,674,035	309	459 254	38 62
1898	169,946	14,378,625	84	6,342,154	37 26	12,418	4,313,861	347	539,233	43 42
1897	169,333	16,10 ,797	95	6,424,218	37 94	12,025	4,433,628	369	554 204	46 09
1896	178,965	21,305 477	119	5,582,035	31 19	12.333	4,6 8.441	374	577.305	46 81
1895	184 647	29,390,884	159	5,936 959	32 15	13,002	4,581,373	352	572 672	44 04
1894	167 253	17,163,130	103	6,075 748	36 33	11,186	3,716,140	332	464,518	41 53
1893	142 601	12,911,212	91	5 099,929	35 76	9.28	2,971,450	320	371,431	39 99
1892	145,703	12,289,817	84	6,194,068	42 51	9,941	3,827,361	385	478,420	48 13
1882-1901	159,950	18,572,661	116	7,313,397	45 72	10,793	3,769,942	349	471,243	43 66

MANGEL-WURZELS AND TURNIPS.

TABLE XIV. Showing by County Municipalities of Ontario, the area, produce and market value of the crops of Mangel Wurzels and Turnips for the year 1901, together with the totals for the Province for the past ten years and the average for the twenty years, 1882-1901 ; also the averages per acre.

Counties and districts.	Mangel-Wurzels.					Turnips.				
	Acres.	Bushels.	Yield per acre.	Market value.	Market value per acre.	Acres.	Bushels.	Yield per acre.	Market value.	Market value per acre.
				$	$ c.				$	$ c.
Algoma	57	17,100	300	1,368	24 00	550	206,250	375	20,625	37 50
Brant	1,467	702,693	479	56,215	38 32	3,857	1,920,786	498	192,079	49 80
Bruce	2,457	1,240,785	505	99,263	40 40	8,544	4,280,544	501	428,054	50 10
Carleton	1,046	589,944	564	47,196	45 12	1,863	862,569	463	86,257	46 30
Dufferin	539	284,592	528	22,767	42 24	5,106	2,267,061	444	226,706	44 40
Dundas	280	96,040	343	7,643	27 44	226	77,292	342	7,729	34 20
Durham	1,955	1,057,655	541	84,612	43 28	5,557	2,705,259	487	270,626	48 70
Elgin	1,226	649,484	509	51,959	40 72	430	229,190	533	22,919	53 30
Essex	824	243,904	296	19,512	23 68	169	33,800	200	3,380	20 00
Frontenac	312	109,200	350	8,736	28 00	578	215,016	372	21,502	37 20
Glengarry	273	122,850	450	9,828	36 00	389	148,987	383	14,899	38 30
Grenville	261	114,840	440	9,187	35 20	172	51,600	300	5,160	30 00
Grey	2,606	1,248 274	479	99,862	38 32	12,230	5,833 710	477	583,371	47 70
Haldimand	498	151,392	304	12,111	24 32	182	50,414	277	5,041	27 70
Haliburton	37	7 807	211	624	16 88	195	49.335	253	4,933	25 30
Halton	1,477	768,040	520	61,443	41 60	1 931	795.572	412	79,557	41 20
Hastings	1,054	378.386	3 9	30,271	28 72	2,371	896.238	378	89 624	37 80
Huron	4,844	2,596,384	536	207,711	42 88	9,252	4,265.172	461	426 517	46 10
Kent	816	250.512	307	20,041	24 56	116	34,800	300	3,480	30 00
Lambton	1,822	781,638	429	62,531	34 32	181	62 083	343	6,208	34 30
Lanark	498	190,734	383	15,259	30 64	1,189	419,7 7	353	41,972	35 30
Leeds	622	232,006	373	18,560	29 84	556	179,032	322	17,903	32 20
Lennox & Add	434	154,504	356	12,360	28 48	335	103,850	310	10,385	31 00
Lincoln	414	192,696	434	15,416	34 72	370	148,370	401	14,837	40 10
Manitoulin	39	11,700	300	936	24 00	313	109,550	350	10,955	35 00
Middlesex	3,091	1,353,858	438	108,309	35 04	2,208	940,608	426	94,061	42 60
Muskoka	73	21,900	300	1.752	24 00	649	208 978	322	20,898	32 20
Nipissing	32	16,000	500	1,280	40 00	159	79 500	500	7,950	50 00
Norfolk	1,008	361,872	359	28,950	28 72	1,343	506.311	377	50,631	37 70
Northumberland	1,055	525 390	498	42.031	39 84	5,226	2,336 022	447	233,602	44 70
Ontario	2,467	1,339,581	543	107,167	43 44	12,291	6,059 463	493	605,946	49 30
Oxford	3,154	1,810,396	574	144,832	45 92	6,848	3,501,056	512	350,106	51 20
Parry Sound	66	31.020	470	2,481	37 60	1,013	419,382	414	41,938	41 40
Peel	915	461,160	488	36,893	39 04	1,745	834,110	478	83,411	47 80
Perth	4,401	2,213,703	503	177,096	40 24	6,037	2,761 946	458	276,195	45 80
Peterborough	961	512,213	533	40.977	42 64	2,396	1,116,536	466	111 654	46 60
Prescott	249	99,600	400	7,968	32 00	192	64,7 4	337	6,470	33 70
Prince Edward	323	133,722	414	10,698	33 12	157	56,619	367	5,662	36 70
Renfrew	587	138.532	236	11,083	18 88	832	248 768	299	24,877	29 90
Russell	332	112,880	340	9,030	27 20	813	252,030	310	25,203	31 00
Simcoe	2,733	1,317,305	482	105,384	38 56	9,236	4,313.212	467	431,321	46 70
Stormont	258	88,444	343	7,080	27 44	164	52,668	342	5,267	34 20
Victoria	1,787	914,944	512	73,194	40 96	5,316	2,200,824	414	220,082	41 40
Waterloo	1,875	945,600	504	75,600	40 32	6,411	3,179,856	496	317 986	49 60
Welland	269	57,028	212	4,562	16 95	283	84,202	294	8,420	29 40
Wellington	3,261	1.777.245	545	142,180	43 60	15,536	8,482,656	546	848,266	54 60
Wentworth	1,920	1,052,160	548	84,173	43 84	2,866	1,484 588	518	148.459	51 80
York	4,360	2,206,160	506	176,493	40 48	7,546	3,154,228	418	315,423	41 80
The Province :										
1901	61,095	29 683,324	486	2,374,666	38 87	145.909	68,287,467	468	6,828,747	46 80
1900	54,543	24,728,525	453	1,978.282	36 27	156,583	59,330,395	379	5,933,040	37 90
1899	53,401	20,898,387	391	1,671,871	31 31	153,440	58,078,390	379	6,807,839	37 85
1898	47,923	21,957,564	458	1,756 605	36 65	151,601	64 727,882	427	6,472.788	42 70
1897	41,175	18,103,387	440	1,448,271	35 17	149,336	68,297,148	457	8,829,715	45 73
1896	36,101	16,849,401	467	1,347,952	37 34	148 234	69,814 841	471	6,981,484	47 10
1895	34,383	15,961,502	464	1,276,920	37 14	151,806	63,496 702	418	6.349,670	41 83
1894	27.670	11,532,127	417	922.570	33 34	147,657	61,694,487	418	6.164,449	41 78
1893	21,519	8.582,568	399	686,605	31 91	136,604	56 975,355	417	5,697,535	41 71
1892	22,026	10,350,474	470	828,038	37 59	129,627	63,541,641	490	6,354,164	49 02
1882-1901.	29,765	13,201,411	444	1,056,113	35 48	126,011	53,202,856	422	5,320,286	42 22

HAY AND CLOVER—ALL FIELD CROPS.

TABLE XV. Showing by County Municipalities of Ontario, the area, produce and market value of the crop of Hay and Clover for the year 1901, together with the totals for the Province for the past ten years and the averages for the twenty years 1882-1901; also the averages per acre. It also shows the aggregate area and market value of all the field crops enumerated in Table VIII-XV.

Counties and districts.	Hay and clover.					All field crops.		
	Acres.	Tons	Yield per acre.	Market value.	Market value per acre.	Acres.	Market value.	Market Value per acre.
				$	$ c.		$	$ c.
Algoma	19,215	31,897	1.66	254,857	13 26	37,630	570,049	15 15
Brant	28,874	56,882	1.97	454,487	15 74	123,130	1,866,922	15 16
Bruce	102,963	155,474	1 51	1,242,237	12 06	329,756	4,684,470	14 21
Carleton	67,889	147,998	2.18	1,182,504	17 42	192,516	2,974,745	15 45
Dufferin	40,760	82,743	2.03	661,117	16 22	167,871	2,542,293	15 14
Dundas	36,367	75,280	2.07	601,487	16 54	93,066	1,438,686	15 46
Durham	42,119	61,494	1.46	491,337	11 67	201,608	2,740,282	13 59
Elgin	60,445	108,197	1.79	864,494	14 30	208,888	3,324,894	15 92
Essex	40,617	70,267	1.73	561,433	13 82	207,373	4,082,010	19 68
Frontenac	67,786	117,270	1.73	936,987	13 82	150,489	1,935,136	12 86
Glengarry	48,118	104,897	2 18	838,127	17 42	113,999	1,776,575	15 58
Grenville	38,591	77,182	2.00	616,684	15 98	95,916	1,399,412	14 59
Grey	133,389	212,089	1.59	1,694,591	12 70	419,193	5,957,513	14 21
Haldimand	50,331	93,616	1.86	747,992	14 86	155,074	1,767,830	11 40
Haliburton	12,849	18,246	1.42	145,786	11 35	24,069	273,611	11 37
Halton	23,715	39,624	1.67	396,496	13 34	109,723	1,453,424	13 25
Hastings	86,942	155,626	1 79	1,243,452	14 30	253,267	3,379,340	13 34
Huron	110,985	170,917	1.54	1,365,627	12 30	391,636	5,616,649	14 34
Kent	60,700	124,435	2.05	994,236	16 38	294,626	5,282,185	17 96
Lambton	69,171	121,741	1 76	972,711	14 06	245,431	3,615,153	14 73
Lanark	59,218	123,766	2.09	988,890	16 70	148,188	2,149,599	14 51
Leeds	67,317	129,249	1.92	1,032,699	15 34	152,416	2,253,406	14 78
Lennox & Addington	65,265	120,088	1.84	959,503	14 70	171,402	2,244,092	13 09
Lincoln	38,347	63,273	1.65	505,551	13 18	104,792	1,280,598	12 22
Manitoulin	15,969	18,045	1.13	144,180	9 03	30,551	373,616	12 23
Middlesex	95,523	182,449	1.91	1,457,767	15 26	322,839	4,859,994	15 05
Muskoka	23,268	29,783	1.28	237,966	10 23	42,788	526,849	12 31
Nipissing	12,433	15,293	1.23	122,191	9 83	20,998	284,839	13 57
Norfolk	42,021	77,739	1.85	621,135	14 78	170,006	2,189,701	12 88
Northumberland	54,067	92,455	1.71	738,715	13 66	226,855	3,105,158	13 69
Ontario	56,964	95,700	1.68	764,643	13 42	265,019	4,268,361	16 11
Oxford	62,528	128,182	2 05	1,021,174	16 38	243,144	4,064,144	16 71
Parry Sound	24,960	33,946	1.36	271,229	10 87	47,031	627,871	13 35
Peel	34,746	63,933	1 84	510,825	14 70	167,411	2,298,104	13 73
Perth	76,382	150,472	1.97	1,202,271	15 74	291,243	4,950 101	17 00
Peterborough	42,501	71,827	1.69	573,898	13 50	149,440	2,074,779	13 88
Prescott	48,683	104,668	2.15	836,297	17 18	106,749	1,598,228	14 97
Prince Edward	36,922	57,206	1.85	457,076	14 78	124,171	1,559,441	12 56
Renfrew	74 479	146 724	1.97	1,172,325	15 74	192,025	2,474,635	12 89
Russell	27,516	60,810	2.21	485,872	17 66	64,031	916,577	14 31
Simcoe	86,594	156,735	1 81	1,252,313	14 46	407,903	6,142,261	15 06
Stormont	36,482	66,397	1.82	530.512	14 54	84,358	1,263,417	14 98
Victoria	47,166	91,030	1.93	727,330	15 42	194,186	2,744,129	14 13
Waterloo	42,078	82,052	1.95	655,595	15 58	194,562	3,149,168	16 19
Welland	45,517	66,820	1.49	533,892	11 91	120,077	1,422,834	11 85
Wellington	88,096	161,216	1.83	1,288,116	14 62	336,165	5,521,711	16 43
Wentworth	41,259	75,917	1.84	606,577	14 70	148,196	2,144,294	14 47
York	69,136	130,667	1 89	1,044,029	15 10	325,655	5,156,562	15 83
The Province:								
1901	2,557,263	4,632,317	1.81	37,012,213	14 47	8,667,512	128,325,648	14 81
1900	2,526,566	3,133,045	1.24	26,568,222	10 52	8,794,953	114,758,761	13 05
1899	2,505,422	3,498,705	1.40	27,010,003	10 78	8,753,926	105,771,321	12 08
1898	2,453,503	4,399,063	1.79	27,362,172	11 15	8,835,272	110,528,947	12 51
1897	2,341,488	3,811,518	1.63	27,366,699	11 69	8,701,705	106,952,471	12 29
1896	2,426,711	2,260 240	.93	21,879,123	9 02	8,511,444	88,900,135	10 44
1895	2,537,674	1,849,914	.73	22,753,942	8 97	8,321,173	99,655,895	11 98
1894	2,576,943	3,575,200	1.39	27 028,512	10 49	8,227,153	94,055,592	11 43
1893	2,766,894	4,963,557	1.79	37,921,575	13 71	8,054,612	101,886,557	12 65
1892	2,515,367	4,384,838	1.74	35,955,672	14 29	8,080,206	110,562,493	13 68
1882-01.	2,405,639	3,376,786	1.40	30,586,129	12 71	8,006,200	111,167,735	13 89

RATIOS OF AREAS UNDER CROP.

TABLE XVI. Showing by County Municipalities of Ontario the number of acres under the various crops in 1901 per 1,000 acres of cleared land; together with the average for the Province for the past ten years and the average of the twenty years 1882-1901.

Counties and districts.	Fall wheat.	Spring wheat.	Barley.	Oats.	Rye.	Peas.	Corn.	Buckwheat.	Beans.	Potatoes.	Mangel wurzels.	Carrots.	Turnips.	Hay and clover.	Total.
Algoma	5.1	44.4	28.1	190.2	3.0	53.1	2.7	1.6	.3	20.7	1.1	1.2	10.8	378.0	740.3
Brant	157.4	2.3	75.8	128.5	17.9	32.2	57.9	8.1	1.8	12.6	8.2	.7	21.5	160.8	685.7
Bruce	72.2	7.0	30.6	175.9	1.6	98.0	8.1	1.3	.1	7.5	4.6	.8	16.0	192.3	616.0
Carl-ton	1.4	40.8	29.4	243.5	2.4	16.7	32.6	10.6	.6	16.3	3.4	.7	6.0	220.2	624.6
Dufferin	30.1	43.7	61.0	265.7	18.0	55.1	2.5	3.0	.2	12.1	2.2	.8	20.7	165.1	680.2
Dundas	.9	13.3	18.6	215.6	4.6	6.9	70.	14.0	1.1	12.8	1.8	.9	1.4	232.1	594.1
Durham	22.5	65.2	96.8	160.4	33.9	94.8	21.2	8.9	1.1	9.6	6.6	.6	18.8	142.8	683.1
Elgin	108.0	.1	34.6	142.1	8.2	15.7	99.8	10.7	14.8	8.8	3.7	.5	1.3	182.6	630.9
Essex	91.9	1.2	36.4	183.8	5.6	10.3	233.9	2.4	2.8	12.3	2.9	.6	.6	142.4	727.1
Frontenac	3.8	32.7	21.9	163.8	17.9	19.9	25.9	5.5	.9	14.7	1.2	.8	2.2	255.0	566.2
Glengarry	.1	32.9	23.7	225.6	1.7	15.6	30.9	6.6	.6	13.5	1.5	.8	2.1	259.5	615.1
Grenville	.9	14.7	16.6	188.1	9.2	5.1	59.0	18.6	.3	16.5	1.5	.8	1.0	223.7	556.0
Grey	48.3	15.4	34.8	209.4	2.6	79.1	7.8	3.4	.5	9.1	4.0	.6	18.6	202.3	635.9
Haldimand	158.3	7.5	31.4	140.6	21.3	57.4	25.1	2.8	.5	6.3	2.2	.3	.8	218.4	672.9
Haliburton	6.1	30.2	10.8	163.8	7.9	39.0	7.5	5.4	.2	15.4	1.0	1.2	5.2	339.8	636.5
Halton	143.2	23.7	51.0	130.1	4.3	51.6	28.6	1.0	.3	9.5	8.6	.6	11.2	172.2	635.9
Hastings	19.0	42.8	57.8	157.6	28.8	35.9	35.2	10.7	1.0	13.4	2.6	1.0	5.9	215.3	627.0
Huron	96.5	3.0	46.4	193.1	2.3	56.3	15.3	1.3	.4	6.7	7.7	.5	14.6	175.6	619.7
Kent	130.7	1.0	42.0	120.1	1.5	7.8	140.1	2.0	86.0	8.1	1.9	.3	.3	140.6	682.4
Lambton	113.5	2.1	49.1	176.3	1.8	15.7	56.2	.8	2.4	8.7	4.5	.5	.4	169.6	601.6
Lanark	5.9	40.5	12.9	138.6	4.2	27.7	24.3	10.2	.4	9.0	1.6	.4	3.7	186.0	465.4
Leeds	11.8	16.5	15.4	162.1	8.4	8.8	47.8	13.1	1.0	10.9	2.2	.6	2.0	237.9	538.5
Lennox & Addington	7.4	32.5	70.4	147.0	22.9	35.3	29.0	12.4	.9	14.2	1.5	.6	1.2	220.8	666.1
Lincoln	123.7	5.1	12.4	130.2	15.7	35.2	61.4	2.6	1.3	11.8	2.7	.6	2.2	233.6	638.5
Manitoulin	11.1	55.8	21.6	126.2	2.6	106.0	6.8	1.6	.3	13.3	.9	1.2	7.6	388.8	743.8
Middlesex	101.4	1.1	36.4	156.1	1.3	19.1	47.0	1.8	1.4	9.6	5.2	.5	3.7	161.6	546.2
Muskoka	2.1	17.9	13.9	186.5	4.1	50.1	6.8	2.4	.2	18.9	1.2	1.2	10.5	376.5	692.3
Nipissing	3.8	31.7	11.6	158.9	2.0	49.4	2.5	.5	.1	26.8	1.1	.5	5.5	427.4	721.8
Norfolk	127.4	.7	25.6	123.7	40.7	18.0	97.6	29.9	4.4	11.7	3.9	1.1	5.1	160.9	650.7
Northumberland	40.0	70.1	51.8	136.4	49.9	73.2	29.8	18.0	1.9	15.0	3.1	1.3	15.3	158.3	664.1
Ontario	36.0	83.6	82.7	211.3	18.9	56.9	22.9	10.6	.5	12.3	6.8	.7	34.1	158.1	735.4
Oxford	105.5	1.5	48.6	196.1	6.1	18.0	59.0	3.2	1.1	8.0	8.3	.3	17.9	163.9	637.5
Parry Sound	7.2	45.5	15.5	196.1	5.0	52.1	3.6	1.6	.7	17.9	1.0	1.3	15.4	379.5	714.9
Peel	90.5	46.8	112.2	160.9	27.6	37.5	17.2	3.6	.4	14.6	3.7	1.6	6.9	136.7	659.6
Perth	110.7	3.0	55.0	230.8	.3	51.8	19.9	.5	....	7.5	10.3	.5	14.2	179.3	683.8
Peterborough	38.0	46.5	34.5	166.8	19.2	79.9	13.7	7.4	.3	11.0	3.9	1.2	9.7	171.7	603.8
Prescott	1	37.0	16.1	223.3	.8	16.6	27.8	8.0	1.3	12.5	1.5	.8	1.1	288.4	632.3
Prince Edward	30.7	50.5	78.3	95.7	63.9	51.3	69.4	25.0	2.2	10.9	1.7	.5	.8	159.5	640.4
Renfrew	1.1	96.8	9.1	162.6	11.9	71.8	11.4	2.6	.8	11.8	1.9	.5	2.7	243.9	628.9
Russell	7	23.8	26.6	230.7	1.8	15.3	28.8	7.5	1.2	11.1	3.2	.7	8.0	269.4	626.8
Simcoe	118.9	31.6	72.8	161.3	11.7	89.8	9.4	8.4	.2	13.3	4.6	.8	15.5	145.1	683.4
Stormont	1.8	21.9	23.4	193.5	.1	8.7	47.4	17.9	.5	14.5	1.8	1.4	1.1	254.6	588.6
Victoria	18.2	83.9	58.7	225.6	14.0	77.1	10.3	8.4	.7	11.0	6.5	.7	19.3	171.5	705.9
Waterloo	175.2	2.2	79.2	234.1	7.6	36.6	26.5	1.7	.9	12.6	7.5	1.2	25.7	168.5	779.5
Welland	129.8	2.4	11.6	133.9	12.8	25.6	62.0	9.2	5.1	14.1	1.5	.3	1.6	250.2	660.1
Wellington	39.4	16.1	70.8	258.3	3.7	68.5	10.9	2.2	....	11.6	6.9	.5	32.7	185.2	706.8
Wentworth	138.1	9.1	48.4	157.7	16.3	39.0	45.4	5.4	.3	16.1	9.0	.6	13.4	192.4	691.2
York	82.5	79.2	103.3	205.3	12.4	35.7	22.7	3.3	.4	20.1	10.1	.9	17.5	160.0	753.4
The Province															
1901	67.8	26.6	47.4	179.3	11.8	44.9	38.8	6.6	4.0	11.5	4.5	.7	10.9	190.3	645.1
1900	80.4	23.3	43.4	180.4	10.7	49.8	38.4	7.7	3.3	12.3	4.1	.8	11.8	190.0	661.4
1899	80.1	30.4	37.4	180.3	10.5	56.7	38.6	10.1	3.1	12.8	4.0	.9	11.7	191.1	667.7
1898	80.7	30.0	33.8	182.9	12.7	66.6	40.1	11.5	3.4	13.1	3.7	1.0	11.7	188.8	680.0
1897	73.9	25.2	35.1	189.3	14.6	69.8	42.3	11.8	3.9	13.2	3.2	.9	11.6	182.2	677.0
1896	69.2	20.2	36.5	191.4	11.7	65.5	39.2	11.5	5.4	14.1	2.8	.9	11.7	191.5	671.6
1895	59.8	18.0	38.5	191.0	9.7	64.4	36.4	10.9	5.8	14.9	2.8	1.0	12.2	204.2	669.6
1894	63.4	18.7	39.6	190.6	7.3	63.9	30.8	11.8	4.8	13.6	2.3	.9	12.0	209.6	699.3
1893	75.5	29.4	38.6	159.9	5.6	61.0	25.9	11.0	4.0	11.8	1.8	.8	11.3	228.4	665.0
1892	80.6	54.3	41.7	155.3	6.1	64.6	22.8	10.4	2.8	12.2	1.8	.8	10.8	209.8	674.0
1882-1901	77.1	38.7	52.2	166.3	9.8	60.5	27.2	8.4	3.3	13.5	2.5	.9	10.6	202.3	673.3

PASTURE—ORCHARD—VINEYARD—APPLES.

TABLE XVII. Showing by County Municipalities of Ontario the area in pasture (cleared land), orchard and garden, and vineyard, for the year 1901, together with the totals for the Province for the past ten years; also the number of apple trees and the yield.

Counties and districts.	Pasture.	Orchard and garden.	Vineyard.	Apple trees. 15 years and over. No. of trees.	Bushels.	Bush. per tree.	No. of trees under 15 years.
	acres.	acres.	acres.				
Algoma	7,320	829	3	2,083	7,686	3.69	17,154
Brant	25,946	6 461	79	116,324	207,057	1 78	35,363
Bruce	127,711	9,840	52	250,220	730,642	2 92	88,235
Carleton	85,172	3,230	26	43 095	159,452	3 70	64,144
Dufferin	40,497	2,942	53	60,130	108,234	1 80	43,813
Dundas	42,825	2,891	32	81,084	267,577	3 30	40,772
Durham	50,400	7,600	25	189,028	223,053	1.18	106,143
Elgin	73,837	10,673	181	202,015	555,541	2 75	94,509
Essex	30,348	12,338	1,797	179,449	261,996	1.46	77,840
Frontenac	73,804	4,234	11	83,705	144,810	1.73	59,346
Glengarry	54,028	2,182	10	43,021	138,528	3 22	38,808
Grenville	54,017	2,648	21	67,224	204,361	3 64	50,392
Grey	138,742	14,769	98	362,229	1,180,867	3.26	186,228
Haldimand	35,557	6,988	81	152,053	164,217	1.08	38,157
Haliburton	8,978	487	16	3,564	11,797	3.31	9,163
Halton	28,506	10,082	323	220,117	202,508	.92	51 938
Hastings	94,406	10,753	67	189,853	463,241	2.44	179,080
Huron	157,731	14,126	199	350,910	743,929	2.12	136 321
Kent	55,280	16 643	461	309,829	396,581	1.28	154,403
Lambton	87,181	12.375	157	249,443	593,674	2 38	124,749
Lanark	115,531	2,872	20	50,685	108,466	2.14	47,196
Leeds	93,165	6,674	11	85,146	271,616	3.19	55,544
Lennox & Addington	67,633	6 505	12	88,901	200,027	2.25	101 560
Lincoln	21,925	16,849	3,740	242,547	283,780	1.17	19,394
Manitoulin	7,039	599	8	4,379	15,852	3.62	15,035
Middlesex	173,060	16,151	263	290,216	754,562	2.60	137,190
Muskoka	11,975	873	9	3,229	8,525	2.64	15,872
Nipissing	5,442	270	10	574	574	1.00	2,950
Norfolk	35,377	10,543	152	196,782	342,401	1.74	36,743
Northumberland	66,292	13,342	147	334 978	917,840	2.74	235 751
Ontario	55,418	9,377	80	218,883	365 535	1.67	127.749
Oxford	83,451	10,786	74	206,115	426 658	2 07	43,908
Parry Sound	12,691	585	3	1,186	4,104	3 46	7,322
Peel	37 932	6 240	236	123,864	218.001	1 76	44,578
Perth	87,114	7,489	42	157,757	422,789	2 68	49.710
Peterborough	60.880	3,776	49	66.619	241,827	3 63	54,435
Prescott	37.840	1,577	27	32,152	108,995	3 39	33.330
Prince Edward	37,197	9,260	42	188,192	434,724	2.31	149,820
Renfrew	78,582	2,352	60	20.671	45,683	2 21	41.206
Russell	23 352	700	36	8 616	11,890	1.38	15.717
Simcoe	87,170	11,845	100	222 653	585,577	2.63	192.489
Stormont	42,369	2,178	44	58,844	223,607	3 80	30.574
Victoria	51,158	3,593	30	71 496	165,156	2.31	57,462
Waterloo	26,772	5,859	9	114 082	126 631	1.11	41,928
Welland	27.018	8,838	920	186,988	299,181	1.60	18,935
Wellington	78,013	7,824	92	170.018	355,338	2 09	54,662
Wentworth	29,324	15,6 5	2,245	233,225	396,483	1.70	54.782
York	51,967	12,142	93	243,761	329,077	1.35	109,998
The Province:							
1901	2.777,983	346,915	12,227	6,777,935	14,430 650	2.13	3,392.701
1900	2.694,600	339,411	10 687	6,518,048	36,993,017	5.68	3,430,670
1899	2,710,268	338,073	10,802	6,324,842	19,126,439	3 02	3,445,135
1898	2,708,043	335,420	10.118	6,221,824			3,458,820
1897	2 658,945	326,341	11,100	6,102,399	13.313,720	2 19	3,435,018
1896	2.661 744	*320 122		5,913,906	55,895,755	945	3.548 058
1895	2,728 655	*312,787		5,835,915			3,362,401
1894	2,703,241						
1893	2,682,180						
1892	2,562,040						

* Including vineyard.

HORSES.

TABLE XVIII. Showing by County Municipalities of Ontario the number and value of horses on hand on July 1, 1901, together with the totals for the Province for the past ten years; also the number and value of horses sold during the year ending June 30.

Counties and districts.	On hand July 1.					Sold in year.		
				Totals.				
	Working horses.	Breeding mares.	Other horses.	No.	Value.	No.	Value.	Value per head.
					$		$	$
Algoma	1,590	331	421	2,342	233,006	216	21,168	98
Brant	6,210	942	1,321	8,473	622,322	554	42,104	76
Bruce	13,269	3,583	5,187	22,039	1,841,674	2,114	183,918	87
Carleton	8,396	1,878	2,401	12,675	1,111,576	908	81,720	90
Dufferin	6,209	1 829	2,445	10,483	835,264	1,005	81.405	81
Dundas	4,861	1,058	1,445	7,364	544,762	712	53,400	75
Durham	9,249	1.862	3,126	14,237	1,139,786	1,037	87.108	84
Elgin	11,042	2,167	3.322	16,531	1,259,426	1,201	99,683	83
Essex	11,060	2,258	3,740	17,058	1,310.632	1,195	93,210	78
Frontenac	6,988	1,041	1,531	9,560	692,767	781	61,699	79
Glengarry	6,004	1,635	2,409	10,048	712,708	419	34.358	82
Grenville	4,742	896	1,367	7,005	510,769	427	32.025	75
Grey	16,883	4,267	6 294	27,444	2,163,256	2,520	214,200	85
Haldimand	6,785	1,701	2,677	11,163	814,391	795	59,625	75
Haliburton	1,114	219	400	1,733	124,326	146	9,490	65
Halton	5,749	868	1,349	7 966	626,702	399	32,319	81
Hastings	12,459	1,843	3,376	17,678	1,261,185	1,506	105,420	70
Huron	16,604	4,594	6 636	27,834	2,424,562	3 476	316,316	91
Kent	14,505	3,263	4 990	22,758	1,823,452	1,684	148,192	88
Lambton	11,054	3,033	4,709	18,796	1,531,002	1,785	141,015	79
Lanark	6 610	1,248	1,756	9,614	802,826	1,016	84,328	83
Leeds	7,383	1,262	1,777	10,422	783,142	840	67,200	80
Lennox & Addingt'n	7,965	1,341	2,138	11,444	806,736	1,114	84 664	76
Lincoln	6,202	850	1,278	8,330	645,043	606	47,874	79
Manitoulin	1,218	305	393	1,916	164,874	229	17,175	75
Middlesex	16,544	4,451	7,022	28,007	2,307,120	2,730	256,620	94
Muskoka	2,176	437	610	3,223	280,924	249	20,169	81
Nipissing	890	175	252	1.317	114,670	47	4,324	92
Norfolk	9,033	1,579	2,697	13.309	955.473	1,033	73,343	71
Northumberland	10,532	2,033	3,481	16 046	1,171,021	1,199	98,318	82
Ontario	11,132	3,057	4,087	18,276	1,649,179	1,464	146,400	100
Oxford	11,879	2,551	4,545	18,975	1,543,488	1,530	143,820	94
Parry Sound	1,944	438	497	2,869	269,432	262	20,960	80
Peel	7,434	1,719	2,392	11,545	1,051,180	903	90 300	100
Perth	12,317	3 864	4,903	21,084	1,868,721	2,138	200 972	94
Peterborough	7,184	1,445	2,019	10,648	842.863	623	51.086	82
Prescott	4,351	1,290	1.605	7,246	591,935	668	56,780	85
Prince Edward	6,039	1,095	2,130	9,264	628.941	656	49,856	76
Renfrew	7 991	1,896	2,208	12,098	1,107,392	867	75,429	87
Russell	2.858	1,020	988	4,866	424,226	225	22,050	98
Simcoe	18 166	4,554	6,783	29.503	2,473,917	2,626	233,714	89
Stormont	4,006	1,138	1,582	6,726	477,490	553	35,392	64
Victoria	7,806	2,041	2,645	12,495	1,048.517	797	64,557	81
Waterloo	8,724	1,707	2,043	12,474	975,750	802	66,566	83
Welland	6,282	853	1,679	8,814	664,721	600	50,400	84
Wellington	14,110	3,675	4,578	22,363	1,813,230	1,906	177,258	93
Wentworth	8,432	1,415	2,198	12.045	991,456	682	58,652	86
York	14,394	3,433	4,405	22,237	1,997,630	1,510	151,000	100
The Province:								
1901	398.358	90,148	131 837	620,343	50,038,465	50,755	4,347,582	86
1900	405 883	90,136	121.290	617,309	46,916,999	47,926	3,774.480	79
1899	418,490	86,614	110,420	615,524	42,713,557	45,367	3,204,306	71
1898	430,504	77.886	102.851	611.241	38,659,896	44,414	2,884,107	65
1897	436,921	69.940	106,809	613,670	36,111 805	43,511	2,700,479	62
1896	434,384	66,893	123,482	624 749	37,185,693	44,458	2,712,888	61
1895	423,673	72,156	151,867	647,696	40,283,754	40 346	2,616 391	65
1894	395.686	88,962	190,129	674,777	46,245,6?4	41,916	3.222,500	77
1893	373 615	100,553	211,019	685.187	50,527,472	47,897	4,001,524	84
1892	358,668	109,865	220.281	688,814	55,812,220	46,955	4,280,132	91

CATTLE.

TABLE XIX. Showing by County Municipalities of Ontario the number and value of cattle on hand on July 1, 1901, together with the totals for the Province for the past ten years; and also the number and value of cattle sold or slaughtered during the year ending June 30.

Counties and districts.	On hand July 1.					Sold or slaughtered in year.		
	Milch cows.	Store cattle over 2 years.	Young and other cattle.	Total.		No.	Value.	Value per head.
				No.	Value.			
					$		$	$ c.
Algoma	3,687	1,960	5,938	11,585	246,523	2,585	72,380	28 00
Brant	11,673	3,728	13,277	28,678	665,927	6,832	186,719	27 33
Bruce	29,518	26,312	48,103	103,933	2,634,073	29,959	1,167,802	38 98
Carleton	32,327	11,871	27,024	71,222	1,693,089	14,593	456,631	31 25
Dufferin	12,561	10,145	18,774	41,480	962,150	8,582	301,228	35 10
Dundas	24,835	2,570	12,509	39,914	951,186	5,394	131,883	24 45
Durham	15,852	7,290	19,500	42,642	1,047,230	9,458	326 868	34 56
Elgin	25,418	11 027	29,092	65,537	1,700,658	18,206	594,426	32 65
Essex	16 304	7 300	20,580	44,184	1,324,318	12,203	344,613	28 24
Frontenac	26,003	6,838	19 654	52,495	1,083,071	8,060	220,000	27 50
Glengarry	28,460	4,159	16,341	48,960	1,040,842	6,383	135,958	21 30
Grenville	21,157	3,891	10,402	35,450	823,103	5,659	135,363	23 92
Grey	39,044	26,995	64,129	130,168	2,987,160	33,522	1,230,257	36 70
Haldimand	13,299	4,025	15,776	33,100	800,241	8,094	225,175	27 82
Haliburton	3,492	1,400	5,470	10,362	181,169	2,412	45,225	18 75
Halton	9,867	5,587	11,081	26,535	697,226	6,808	251,215	36 90
Hastings	45,489	9,341	35,840	90,670	1,806,990	14,640	293,823	20 07
Huron	94,184	32,885	58,159	125,228	3,319,440	37,756	1,442,279	38 20
Kent	20,452	16,581	30,311	67,344	1,718,527	18,239	636,176	34 88
Lambton	21,233	20,008	35 799	77,040	1,937,043	23,568	786,709	33 38
Lanark	24,392	8,933	22,946	56,271	1,241,192	10,910	321,518	29 47
Leeds	34,934	6,464	18,840	60,238	1,330,666	8,425	206,160	24 47
Lennox & Addington	22 813	7,673	18,711	49,197	961,378	9,769	217,849	22 30
Lincoln	8,618	2,011	8,353	18,982	454,274	5,468	151,682	27 74
Manitoulin	3,137	1,622	5,433	10 192	205,867	2,715	74 418	27 41
Middlesex	36,787	32,969	53,112	122,868	3,651,598	42,388	1,696,368	40 02
Muskoka	5,751	3,062	8,623	17,436	336,574	3,786	86,889	22 95
Nipissing	2.145	888	3,203	6,236	108,584	1,330	28,090	21 12
Norfolk	17,806	4,092	16,255	38,153	818,957	9,530	207,373	21 76
Northumberland	24,636	6 771	23,003	54,410	1,129,208	9,869	220,079	22 30
Ontario	20,322	11,923	29,816	62,061	1,567,144	16,603	623,775	37 57
Oxford	40,174	14,067	31,886	86,127	2,378 196	24,313	924,380	38 02
Parry Sound	5,334	2 654	8,172	16,160	307,437	3,209	74,192	23 12
Peel	13,549	6,768	14,310	34,627	950,808	7,988	303,943	38 05
Perth	33,458	17,530	43,169	94,157	2,352,767	23,081	840,379	36 41
Peterborough	20,511	7,461	22,753	50,725	997,175	9,301	245 732	26 42
Prescott	19 900	3 595	12,035	35,530	764,603	4,577	108,109	23 62
Prince Edward	14,558	2,662	10,023	27,243	516,404	4,372	89,888	20 56
Renfrew	24,259	13,861	31,232	69,352	1,305,193	16,613	401,204	24 15
Russell	12,484	2,487	8,833	23,804	537,222	3,801	77,350	20 35
Simcoe	32,708	19,647	45,327	97,682	2,190,563	24 344	790,450	32 47
Stormont	22,448	2,309	9,759	34,516	752,628	4,398	103,309	23 49
Victoria	17,424	11,934	27,181	56,539	1,151,972	10,121	319,614	31 52
Waterloo	15,294	4,345	18,557	38,196	961,305	17,816	768,048	43 11
Welland	9,469	3,136	10,130	22,735	523,361	6,795	189,241	27 85
Wellington	27,414	20,665	42,906	91,045	2,348,204	29,294	1,326,725	45 29
Wentworth	14,623	3,915	15,030	33,568	868,729	7,955	246,605	31 00
York	24,209	8,511	20,323	53,043	1,462,744	19,216	660,070	34 35
The Province:								
1901	984,012	445,868	1,077,740	2,507,620	59,527,119	610,880	20,286,963	33 21
1900	976,124	392,665	1,060,541	2,429,330	56,320,810	560,893	18,017,989	32 12
1899	974,474	356,505	987,376	2,318,355	52,938,500	555,583	17,303,426	31 14
1898	965,021	345,695	905,227	2,215,943	47,286,254	552,485	16,121,559	29 18
1897	940,236	365,406	876,684	2,182,326	42,683,557	503,007	13,350,223	26 54
1896	920,346	370,409	891,203	2,181,958	44,383,638	436,451	12,381,218	28 37
1895	888 228	365,644	896,251	2 150,103	46,708 017	418,131	13,272,127	31 74
1894	834,237	376,809	888,255	2,099,301	47,577,587	441,698	15,219,256	34 46
1893	803,598	378,014	876,270	2,057,882	47,718,025	461,501	16,671,021	36 12
1892	787,836	366,705	874,599	2,029,140	45,548,475	436,352	15,979,135	36 62

SHEEP.

TABLE XX. Showing by County Municipalities of Ontario the number and value of sheep on hand on July 1, 1901, together with the totals for the Province for the past ten years; also the number and value of sheep sold or slaughtered during the year ending June 30.

Counties and districts.	On hand July 1.				Sold or slaughtered in year.		
	Over 1 year.	Under 1 year.	Total. No.	Total. Value.	No.	Value.	Value per head.
				$		$	$ c.
Algoma	6,139	4 558	10,697	46,149	3,402	13,64	4 01
Brant	11.613	8,967	20,580	117,177	9,354	52 5·9	5 62
Bruce	58.219	53.006	111 225	550,676	43.625	206,346	4 73
Carleton	15,545	13,914	29,459	115,998	12,501	42,628	3 41
Dufferin	21,773	19,037	40,810	180,749	13,883	59,558	4 29
Dundas	5,425	5,299	10,724	42,906	5,838	24.8 2	4 25
Durham	24.574	18,355	42,929	192,729	15,829	65,532	4 14
Elgin	25,836	24,918	50,744	216,384	24,497	97 988	4 00
Essex	10,865	9,166	20,031	72,852	7,999	28,396	3 55
Frontenac	14,947	13,939	28,886	104,546	12,146	44,090	3 63
Glengarry	9,139	7,379	16,518	63,727	6,363	25,070	3 94
Grenville	6,012	5,89	11 903	47,337	6,377	22,51	3 53
Grey	72,207	64,504	136,711	611,793	51.690	220,199	4 26
Haldimand	12,418	12,371	24 789	111,102	10.760	46 268	4 30
Haliburton	6,666	5,133	11,799	42.159	3,301	10.464	3 17
Halton	11,280	10,449	21,729	113,653	9.848	50,914	5 17
Hastings	27,161	21,966	49.127	173,512	17,635	55,903	3 17
Huron	46,587	44,2·3	90,870	429,997	37,758	172,932	4 58
Kent	22,662	21,104	43,766	186 087	20,981	90,428	4 31
Lambton	22,671	22,406	45,077	195,011	21,849	94,888	4 32
Lanark	27,923	23,787	51.710	193,475	20,199	74,1·0	3 67
Leeds	9,211	8,616	17,827	70,446	9,045	34,823	3 85
Lennox and Addington	13,779	12,080	25,859	100,069	12,343	46,657	3 78
Lincoln	7,872	6,927	14,799	67,811	8 067	33 478	4 15
Manitoulin	12,515	10 937	23.452	85,893	6,61·	21,492	3 25
Middlesex	30,571	26,696	57.267	296 927	25,140	134,750	5 36
Muskoka	12,366	10,173	22,539	90,662	8,327	28,728	3 45
Nipissing	951	804	1,755	6,268	755	3,2·4	4 27
Norfolk	14,765	13.072	27 837	111,463	12,358	47,578	3 85
Northumberland	14,582	12,979	27 561	113.337	11,596	49 747	4 29
Ontario	33,463	25,409	58,872	289 870	23 053	99,589	4 32
Oxford	9,473	8,963	18,436	86,488	8 946	39,273	4 39
Parry Sound	13,924	11 052	24,976	96,192	7,653	26,032	3 48
Peel	11,563	9,649	21,212	104,616	7,871	36,·07	4 60
Perth	21.580	20,732	42,312	203,616	19,443	99,354	5 11
Peterborough	16,984	13,758	30,741	132,501	10,538	45,810	4 35
Prescott	8,364	6,540	14,904	56,992	6,362	20,549	3 23
Prince Edward	4,095	3,641	7,736	31,170	5,106	19,788	3 88
Renfrew	40.120	31,801	71,421	247,272	24,502	80,367	3 28
Russell	8,354	5,487	13,841	61.948	4,181	16,264	3 89
Simcoe	58,977	46,240	105,217	442 069	43,604	184,057	4 28
Stormont	5,331	4,066	9,397	33.981	3 361	12,537	3 73
Victoria	32,008	22,826	54,828	240,840	23,521	95,260	4 05
Waterloo	13.820	12.076	25,896	116 466	12,002	57.970	4 83
Welland	9.846	9.428	19,269	82.642	9,757	39,711	4 07
Wellington	48 092	42,455	91.147	473.445	36,243	175,779	4 85
Wentworth	10,135	9,019	19,154	97,900	9,808	43,351	4 42
York	24,622	18,838	43,460	224,520	23,724	111,740	4 71
The Province :							
1901	947,614	814,185	1,761,799	7,772,793	729,148	3,103,513	4 26
1900	949,597	847,616	1,797 212	7,711.496	690.058	2,872,609	4 16
1899	930,314	842,280	1,772,603	7,315,729	665,2 8	2,629,201	3 95
1898	877,872	799,142	1,677,014	6,499,695	664,239	2,460,379	3 70
1897	897.685	792 665	1,690,350	6,003,194	732,872	2,538,171	3 46
1896	995.616	853,732	1,849,348	6,652,202	766,896	2 646.709	3 45
1895	1,095,995	926,740	2,022,735	7 708,442	632,315	2,484,612	3 64
1894	1,086,635	929,170	2,015,805	8,606,671	616,446	2,552,267	4 14
1893	1,032,069	903 869	1,935,938	9.016.118	616,237	2 784.288	4 52
1892	979,962	870,511	1,850,473	8,589,557	575,934	2,640,190	4 58

HOGS.

TABLE XXI. Showing by County Municipalities of Ontario the number and value of Hogs on hand July 1, 1901, together with the totals for the Province for the past ten years; also, the number and value of hogs sold or slaughtered during the year ending June 30.

Counties and districts.	On hand July 1.				Sold or slaughtered in year.		
	Over 1 year.	Under 1 year.	Totals. No.	Totals. Value.	No.	Value.	Value per head.
				$		$	$ c.
Algoma	1,127	3,981	5,108	30,825	5,471	44,534	8 14
Brant	3,502	23,169	26,671	163,035	37,258	324,890	8 72
Bruce	7,318	41,757	49 075	310,862	70,789	604 538	8 54
Carleton	4,450	23,659	28,109	169 617	30,529	267,129	8 75
Dufferin	3,054	22 957	26,011	143,155	34,156	326,190	9 55
Dundas	3,456	18 866	22.322	134,811	26 718	205,729	7 70
Durham	3,251	12,254	15,505	105 672	39,242	321,784	8 20
Elgin	7,668	52,735	60,403	366,029	76 379	699,632	9 16
Essex	15 316	77,899	93,215	543,602	94,644	842,332	8 90
Frontenac	3 362	13,326	16,628	110.948	18,763	168,867	9 00
Glengarry	4,023	14,661	18,684	114,179	19,644	183,082	9 32
Grenville	2,356	14,115	16 471	99,537	18,939	167,80 0	8 86
Grey	8,290	50,410	58,700	356,733	89 653	796,119	8 88
Haldimand	2,935	17,011	19,946	122,913	28.243	248,821	8 81
Haliburton	588	1,933	2,521	14,129	2,671	22,383	8 38
Halton	2,421	16,337	18,758	114,781	28.712	248,359	8 65
Hastinga	8,037	31,602	39,639	267,850	49,200	433,944	8 82
Huron	7,857	53,848	61,705	415,456	92,072	848,904	9 22
Kent	14,563	87,697	102 260	619,094	107,589	939,783	8 92
Lambton	5.273	35,202	40,475	244,256	53,609	470,151	8 77
Lanark	3,638	17,455	21,093	121,764	21,370	179,935	8 42
Leeds	4,774	21,802	26,576	164,073	29,785	271,9 7	9 13
Lennox & Addington	3,008	14,585	17,593	116,801	25,959	247.130	9 52
Lincoln	2,064	13,323	15,387	95,144	19,929	169 795	8 52
Manitoulin	985	3,590	4,575	25.475	5,285	40,219	7 61
Middlesex	7,634	47,213	54,847	350,495	81,489	730,956	8 97
Muskoka	837	3,315	4,152	25,324	5,929	40 614	6 85
Nipi-sing	667	1,910	2.577	13,792	1.573	15,252	9 76
Norfolk	5,074	30,871	35,945	219,318	47,965	450,871	9 40
Northumberland	4,235	22.743	26 978	166,439	38,596	312,628	8 10
Ontario	5,569	38,943	44.512	271,798	66,179	563,845	8 52
Oxford	6,585	50,713	57,298	3 6,808	86,729	797,040	9 19
Parry Sound	1,362	3.605	4,967	31,548	5,390	43,120	8 00
Peel	3,320	19,234	22.554	147.372	32,250	233,813	7 25
Perth	6,187	44,081	50,268	345,165	68.278	643,862	9 43
Peterborough	3,227	17,827	21,054	129 574	29 365	276,325	9 41
Prescott	3,148	9,080	12,228	82,399	9,779	105 222	10 76
Prince Edward	1,690	8.4 0	10,090	66.791	15,953	127,145	7 97
Renfrew	7,298	18,537	25.835	157,013	20,264	186.024	9 18
Russell	2,400	6,299	8.699	56,366	9,889	106,603	10 78
Simcoe	10,487	66,950	77,437	430,064	96,951	881,285	9 09
Stormont	2,227	12,521	14,748	94,730	17,252	150,615	8 68
Victoria	4,552	23,226	27,778	166,542	32,166	301.074	9 36
Waterloo	4.584	27,832	32,416	220,896	19,966	447.828	9 09
Welland	1,883	12,307	14,190	88,470	19,748	154,429	7 82
Wellington	7,550	51,753	59,303	393 065	91,582	852,628	9 31
Wentworth	3,160	22,232	25,392	165,130	38,616	324,374	8 40
York	5,984	45,203	51,187	314,872	81,477	703,850	8 70
The Province:							
1901	222,916	1,268,969	1,491,885	9,298,712	1,973,405	17,548,490	8 89
1900	265.457	1,506,184	1,771 641	9,598,153	2,056,049	15,800,799	7 69
1899	295,349	1,675,721	1,971,070	10,180 338	1,875,466	14,157,394	7 55
1898	265,048	1,375,739	1,640,787	8,720,242	1,592,697	11.852,535	7 44
1897	235,479	1,049,484	1 284,963	6 533,210	1,399,967	10,083.8 2	7 20
1896	243,756	1,025,875	1.269 631	6,505,227	1,304,359	10.022,5 5	7 68
1895	244,185	1,054,887	1,299,072	7,101,211	1,159,992	10.067 667	8 68
1894	227,878	9 4,255	1,142,133	6,909,262	1,030,567	10 158,978	9 86
1893	220,356	791.626	1,0 2.022	6,622,129	975,358	10,296.828	10 56
1892	231,320	765,654	996,974	5,479,093	928,791	8,775,852	8 97

POULTRY.

TABLE XXII. Showing by County Municipalities of Ontario the number and value of Poultry on hand July 1, 1901, together with the totals for the Province for the past ten years; also, the number and value of Poultry sold or killed during the year ending June 30.

Counties and districts.	On hand July 1.						Sold or killed in year.	
	Turkeys.	Geese.	Ducks.	Other fowl.	Totals.			
					No.	Value.	No.	Value.
						$		$
Algoma	2,849	1,385	1 484	33,093	38,811	13,317	14,056	4,777
Brant	6,261	3,230	3,964	104,541	117,996	33,940	49,811	16,438
Bruce	25,414	15,856	20,968	250,395	312 633	93,955	81,861	31,926
Carleton	23,435	12,441	12,992	191,179	240,047	75,356	97,461	37,035
Dufferin	11,641	11,758	5,759	106,047	135,204	40,024	44 025	16,065
Dundas	15,300	6,260	5,285	133,478	160,323	47,703	46,839	20,141
Durham	18 789	10,038	8,047	190 428	227,302	70,114	77,982	26,514
Elgin	30,205	5,435	7,201	259,142	301,983	84,959	118,920	45,190
Essex	30,856	9,803	16,162	287,641	344,462	91,628	142,185	46,921
Frontenac	16,728	7,606	8,438	109,735	141,897	50,274	77,335	29,387
Glengarry	10,023	4,429	6,075	129,331	149,858	41,312	53,445	18,171
Grenville	12,414	4,237	5,447	96,538	118,636	35,309	39,914	12,772
Grey	30,444	18,231	23,164	327,073	398 912	113,366	136,848	50,634
Haldimand	16,009	4,984	8,230	142,676	171,899	50,343	75,081	26,278
Haliburton	2,774	868	525	17,119	21,286	6,072	7,041	2,464
Halton	10 597	5,136	5 330	115,728	136,781	41,751	58,396	23,358
Hastings	18,554	10,159	12,447	228,000	269,160	77,860	100,282	39,110
Huron	44,147	19,422	27,451	370,705	461,725	127,075	133,733	54,831
Kent	27,062	8,114	15,723	342,528	393,427	102,196	122,753	36,826
Lambton	36,407	8,635	17,160	297,751	359,953	99,603	126,343	50,537
Lanark	16,115	8,425	4,772	134,881	164,193	50,296	50,135	20,555
Leeds	19,784	5,186	5,088	123,619	153 677	48,016	65,886	29,649
Lennox and Add'n	9,549	4,835	7,577	137,866	159,827	42,182	63,668	27,364
Lincoln	8,118	2,575	5,204	107,194	123 091	36,330	63,176	25,402
Manitoulin	2,401	1,740	1,031	21,326	26,508	7,691	9,939	3,976
Middlesex	66,807	13,347	17,205	418 392	515,751	157,926	177,864	71,146
Muskoka	3,467	701	1,188	43,205	48,561	13,965	18,571	7,428
Nipissing	545	644	530	19 544	21,263	6,835	11,266	3,267
Norfolk	18,334	4,805	8,349	192,948	224,436	62,057	86,793	26,038
Northumberland	17,573	5,573	12,049	192,655	227,250	67,696	71,846	25,865
Ontario	16,664	10,335	9,927	218,347	255,273	76,337	93,974	33,831
Oxford	21,791	5 604	11,409	241,109	279,713	82,247	95,710	36,370
Parry Sound	3,700	1,888	760	39,208	45,556	14 853	14,588	4,376
Peel	19,310	8,709	11 847	157,329	197,195	69,900	88,896	35,558
Perth	18,731	14,780	16,396	276,077	325,984	88,338	83,340	33,336
Peterborough	23,727	10,418	9 124	148,796	192,065	59,285	53,177	21,271
Prescott	8,868	4,058	5,938	94,428	113,292	38,816	62,238	21,783
Prince Edward	9,068	3,166	5,586	100,439	118,259	34,202	40,953	13,514
Renfrew	15,398	8,737	6,278	122,219	152,632	49,748	51,633	17,555
Russell	6,916	2,446	3,679	48,214	61,255	20,539	30,555	11,917
Simcoe	31,559	21,204	19,821	352,546	425,130	121,825	134,125	54,991
Stormont	8 653	4,194	1,766	89,081	103,694	29,155	35,396	12,035
Victoria	18,686	8,100	9,950	171,465	207,601	61,563	58,761	24,680
Waterloo	4,339	3,733	6,889	156,387	171,348	45,025	58,854	18,245
Welland	8,842	3,288	6,752	134,816	153,648	43,991	73,840	23,629
Wellington	27,524	17,937	15,898	276,621	337,980	102,131	102,637	39,002
Wentworth	9,716	3,883	6,073	135 272	154,944	46,186	78,745	25,073
York	20,529	12,590	12,156	237,520	282,795	85,880	119,560	47,824
The Province :								
1901	825,823	360,278	435,094	8,124,041	9,745,236	2,859,172	3,495 999	1,305,555
1900	890 933	398,890	457,072	7,794,346	9,541,241	2,727,363	3,164,287	1,176,740
1899	927,456	421,830	458,497	7,536,241	9 344,024	2,658,321	3,102,614	1,162,991
1898	1,024 285	454,335	7,605 653		9,084,273	2,578,136	3,072,767	1,131,923
1897	890,228	409,715	7 135,398		8,435,341	2 318,038	2 965,221	1,083,914
1896	715,770	391,547	6,626,850		7,734,167	2,130,807	2,711,771	985,629
1895	696,604	420 022	6,636,214		7,752 840	2,156,623	2,392,458	840,334
1894	689,205	438,208	6,425,249		7,552,662	2,208,518	2,131,222	782,588
1893	638,527	439,482	6,036,427		7,114,436	2,187,158	2,017,567	753,695
1892	628,504	445,154	6,005 315		7,078,973	2,091,150	1,966,409	778,308

WOOL.—BEES.

TABLE XXIII. Showing by County Municipalities of Ontario the number, weight and value of fleeces of the wool clip in 1901, together with the totals for the Province for the past ten years; also the number of colonies of bees and the value of apiaries.

Counties and districts.	Clip of wool.				Colonies of bees.		
	No.	Pounds.	Lb. per fleece.	Value.	No.	Value (including outfit).	Value per hive.
				$		$	$ c.
Algoma	6 299	37,797	6 00	5,065	241	1,446	6 00
Brant	11,893	78,170	6 58	10 475	3,363	23,339	6 94
Bruce	57,676	377,768	6.55	50.621	5,558	33,015	5 94
Carleton	16,70	95,864	5.74	12,846	6,199	30,995	5 00
Dufferin	21,754	133.227	6 12	17,852	2 9 5	15,770	5 41
Dundas	5,5 2	34,254	6.17	4,590	4,997	22,736	4 55
Durham	24 131	172,166	7.13	23,070	3,638	16,589	4 56
Elgin	25,779	161,589	6.23	21,653	6,461	35,536	5 50
Essex	11,127	70,056	6 29	9,387	6 745	38,716	5 74
Frontenac	14,834	81,746	5 51	10,954	4,508	26,687	5 92
Glengarry	9,703	55,898	5.76	7,490	6,665	32 825	5 00
Grenville	6,139	31,839	5 18	4,266	4,114	17,896	4 35
Grey	73,245	434 272	5 93	58,192	8,927	55,437	6 21
Haldimand	12,259	78,921	6 44	10,575	5,456	24 988	4 58
Haliburton	6,721	34,40	5.12	4,610	360	2,059	5 72
Halton	11 108	79,563	7.16	10,661	1,114	6,328	5 68
Hastings	27.093	141,327	5.22	18,938	6,248	33,489	5 36
Huron	46,929	287,822	6 12	38,501	6 145	38 221	6 23
Kent	22 038	147,891	6 71	19,817	5.955	33.616	5 65
Lambton	23,091	148,131	6.41	19,849	7,221	37,260	5 16
Lanark	27,435	139,973	5.10	18 756	6,717	35,130	5 23
Leeds	9,222	50.713	5.50	6,795	6,684	36,094	5 40
Lennox and Addington	13,597	70,845	5.21	9,493	3,344	19,061	5 70
Lincoln	7,621	41,704	5.47	5,588	1,806	11,522	6 38
Manitoulin	12,753	75,276	5.90	10,087	79	3,520	4 45
Middlesex	30,545	213,595	6 99	28,622	11,160	62,161	5 57
Muskoka	12,231	62,559	5 11	8,383	756	4 249	5 62
Nipissing	942	4,893	5.19	655	122	763	6 25
Norfolk	14,743	86 073	5 84	11,534	4,857	22,488	4 63
Northumberland	14,076	86,897	6 17	11,644	5,206	25,874	4 97
Ontario	34,455	252,267	7.32	33,804	4,092	25,452	6 22
Oxford	9,964	61,018	6 12	8,176	3,341	21,516	6 44
Parry Sound	13,308	75,905	5.70	10,171	318	1,803	5 67
Peel	11,306	83,354	7.37	11,169	1,333	8,198	6 15
Perth	20,963	127,821	6 09	17,128	3,442	17,003	4 94
Peterborough	17,280	98,219	5 68	13,161	3,652	16,799	4 60
Prescott	8,324	49,745	5.98	6,666	5,690	36,473	6 41
Prince Edward	4,311	23,338	5 41	3,127	2,091	9,221	4 41
Renfrew	40,4 9	194,777	4 81	26,100	6,013	30,546	5 08
Russell	8,975	58,117	6 47	7,787	2,644	14,436	5 46
Simcoe	58,375	375,279	6.43	50,297	4,283	26,120	6 10
Stormont	5,743	29,253	5.09	3,920	2,946	13,758	4 67
Victoria	31,779	185,355	5 83	24,837	6,316	37,138	5 88
Waterloo	13,856	84,486	6.08	11,321	1,447	8,406	5 85
Welland	9,929	53,345	5.37	7,148	2,620	20,887	5 77
Wellington	48,314	320,914	6 64	43,002	2,498	15,588	6 24
Wentworth	9,917	66,737	6 73	8,943	3,340	20,741	6 21
York	25,698	179,430	6.98	24,043	7,029	42,174	6 00
The Province:							
1901	950,229	5,834,097	6 14	781,769	202.247	1,114,099	5 51
1900	957,307	5,805,921	6.06	894,112	216,734	1,139,559	5 26
1899	928.184	5,525 122	5 95	790,692	203,343	1,053 454	5 18
1898	865,179	5,104 686	5 90	847,378	190,080	998,049	5 25
1897	887,003	5,130,984	5 79	945,757	166,811	885,196	5 31
1896	991,371	5,581,387	5 63	1,626,975	160,076	854,408	5 34
1895	1,109,140	6,214,811	5 60	1,242,962	173 173	938,6 8	5 42
1894	1,092.467	6 235.036	5.71	1,033.721	200,694	1,051,574	5 26
1893	1,015,497	5,896,891	5 81	1,073,234	205,168	1,162,915	5 67
1892	961,160	5,643,706	5.87	1,027,154	195,822	.....	....
1882-1901	984,089	5,571,695	5.66	999,488	.....	.....	.....

FARM PROPERTY, IMPLEMENTS, AND LIVE STOCK.

TABLE XXIV. Showing by County Municipalities of Ontario the values of farm lands, buildings implements and live stock for the year 1901, together with the totals for the Province for the past ten years; also, the aggregate value of live stock sold or slaughtered as determined from Tables xviii-xxii.

Counties and districts.	Value of farm property.					Value of live stock sold.
	Land.	Buildings.	Implements.	Live stock.	Total.	
	$	$	$	$	$	$
Algoma	2,559,350	640,145	227,385	569,820	3,996,700	156,601
Brant	8,759 832	4,0'8 797	820 779	1,603,401	15,201,809	632,720
Bruce	21 447,260	7,813,392	2,122,223	5 431 240	36,614,115	2,194,530
Carleton	17,020,663	5,799 732	1,563,546	3,165,636	27,549,577	884,543
Dufferin	9,049,253	3.061,370	907,334	2.161 342	15,179,299	784,446
Dundas	7,297 991	2,968,520	850 6'6	1,721 368	12,838,535	435,965
Durham	12,536,765	5,06 ,873	1,222,537	2,555 531	21,377 706	827,806
Elgin	16,491,100	6,340,461	1,715,834	3 627,456	28,174,851	1,536,919
Essex	16,4 6,354	5,502,047	1,665,525	3,043 032	26,636,958	1,355,472
Frontenac	8,552,014	3 248,511	1,013 467	2,041,606	14 855 598	524,043
Glengarry	7,255,972	3,283,889	947,817	1,972.768	13,460,446	396 639
Grenville	6,853,936	3,020,223	687,234	1,516,045	12 077,438	370,471
Grey	21.434,017	8,717,430	2,709 653	6.226 308	39,087,498	2,511,409
Haldimand	7,76 ,054	3,920,873	1,079,766	1,898,890	14,661,683	606,167
Haliburton	1,105,955	317,146	117.518	367,855	1,908.474	90,026
Halton	9,533,103	4,075,343	900,288	1,594,113	16 102 847	606,165
Hastings	14,736,714	5,626 805	1,703,027	3,590,397	25,656 943	928,202
Huron	28,590,145	10,643 091	2,690,345	6 716,530	48,640.114	2,835,262
Kent	23,382,534	7,385,148	2,215,490	4,449 356	37,432 528	1,871,405
Lambton	18,874,172	6,089,998	1,780.993	4,006,915	30,752,075	1,542,791
Lanark	10,137.060	3,884,9 5	1,008,733	2,409, 493	17.440,241	680,466
Leeds	10 830,131	4,215,428	1,057,316	2,396,343	18 499,218	609,769
Lennox and Addington	8,828,102	3,992,501	1,024 174	2,030,166	15,874,943	623,664
Lincoln	9,681,224	4,202,040	928 558	1,298,692	16 113,424	428 731
Manitoulin	980,443	397,986	149,918	489,800	2,018,147	157,280
Middlesex	30,064,622	10,902 886	2,636 290	6,764,066	50,367,864	2,889,840
Muskoka	2,070,369	836,926	302,267	747,389	3,956,89	183,828
Nipissing	1,131,604	306,756	127 644	250,149	1,816,143	54,257
Norfolk	11.214,086	4,788,487	1,268,409	2,167,268	19 438,250	805,203
Northumberland	12 737,862	5,343 995	1 3 9.791	2,647,701	22,049,349	706,637
Ontario	16,339,288	6,461,214	1,586,096	3,854,328	28 240,924	1,467,440
Oxford	20,376,116	8,148, 12	1,822,453	4,487,227	34,784,208	1,940,883
Parry Sound	1,875,169	757,316	259,321	7 9,462	3.611,268	169,280
Peel	11.491 239	4,870,119	1,046,297	2,32 ,876	19.731 531	698,821
Perth	29,679,382	8,119,714	2,076,581	4,8 8,607	35,734,284	1,817,903
Peterborough	9,396,019	3,051,628	907,307	2,161,898	15,516 382	640,254
Prescott	6 936,970	2 790 304	822,695	1,534,745	12.084,714	342,448
Prince Edward	6 774 314	3,173,798	872,736	1,307,508	12,128,356	300,191
Renfrew	10 469 574	3 929,940	1,235 076	2 866,618	18,501,208	760,579
Russell	5,0 0,460	1,519,225	569,177	1,100,30	8,279 163	234,184
Simcoe	24,843,424	9,202,524	2 672,842	5,658 438	42,377,228	2,144,497
Stormont	5,762,220	2,893,767	777 3833	1.387 384	10,820,551	313,888
Victoria	10,451,510	3,774 464	1,693,326	2,668 934	17,988,234	804,585
Waterloo	12,131,997	5,380 683	1,276,202	2,3 9 442	21,108,326	1,358,657
Welland	7.989 488	3,646 020	842,007	1,403,185	13,880 701	487,410
Wellington	19,560,935	8,122,514	2,021,884	5,130,075	31,835 468	2,571,392
Wentworth	13,071,779	5,411 156	1,281 866	2,169,401	21,934,182	698,055
York	24,816,634	9.114 891	1,939,820	4,085,646	39,986,991	1,679,484
The Province:						
1901	585 354 294	226,575,228	59,897.513	129,496.261	1,001,323,296	46,592,103
1900	574,727,610	219,488,370	57,324,130	123,274,821	974.814 931	41,642,617
1899	563,271,777	213,440,281	54,194,857	115 806 445	947,513 360	38,457,018
1898	555,246,569	210 054 396	52,977,242	103,744 223	923,022 429	34,450,583
1897	554 054,552	206,090,159	51,299 098	93,649,804	905,093,613	29,753,599
1896	557,468,270	205,235,429	50,730,358	96,857,566	910,291,623	28,748,995
1895	572,938,472	204,148,670	50 914,385	103,958,047	931.959,574	29,301,131
1894	587,246,117	204,071,766	51,530,172	111,547,652	954,395,507	31,935,589
1893	602,664,361	200, 89,888	51,435,9 9	116,070 902	970,56 ,070	34,510,356
1892	615,828,471	195,644,258	51,003,020	117,501,495	979,977,244	32,453,617

FARM VALUES AND RENTALS.

TABLE XXV. Showing by county Municipalities of Ontario, average values per acre of farm property in 1901 and rentals of leased farms based upon (1) the total acreage occupied, and (2) the area cleared, together with the averages for the Province for the past ten years.

Counties and Districts.	Farm values, average per acre, occupied.					Value buildings, implements and live stock per acre cleared.	Rent per acre on land—	
	Land.	Buildings.	Implements.	Live Stock.	Total.		Occupied.	Cleared.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Algoma	3 38	84	30	75	5 27	28 28	60	1 95
Brant	40 61	18 63	3 81	7 43	70 48	35 87	2 52	2 98
Bruce	23 40	8 31	2 30	5 33	39 94	28 33	1 53	2 01
Carleton	30 15	10 28	2 77	5 61	48 81	34 16	1 98	2 60
Duff rin	25 45	8 61	2 55	6 08	42 69	24 84	1 82	2 22
Durdas	30 83	12 54	3 59	7 27	54 23	35 37	1 96	2 70
Durham	33 71	13 61	3 29	6 87	57 48	29 96	2 33	2 77
Elgin	37 84	14 55	3 94	8 32	64 65	35 29	2 36	2 94
Essex	38 12	12 77	3 86	7 06	61 81	35 80	2 40	2 92
Frontenac	12 39	4 70	1 47	2 96	21 52	23 71	1 10	1 70
Glengarry	25 07	11 34	3 28	6 82	46 51	33 48	1 55	2 19
Grenville	25 25	11 13	2 53	5 59	44 50	30 28	1 57	1 75
Grey	20 13	8 19	2 55	5 85	36 72	26 78	1 27	1 75
Haldimand	27 72	14 00	3 86	6 78	52 36	29 94	1 77	2 21
Haliburton	1 97	56	21	65	3 39	21 22	42	1 07
Halton	42 26	18 07	3 99	7 07	71 89	38 08	2 16	2 88
Hastings	14 22	5 43	1 64	3 47	24 76	27 04	1 35	2 14
Huron	35 80	13 33	3 37	8 41	60 91	31 73	2 09	2 46
Kent	41 41	13 08	3 92	7 88	66 29	32 54	2 80	3 43
Lambton	28 65	9 25	2 70	6 08	46 68	29 12	1 76	2 33
Lanark	15 08	5 78	1 50	3 58	25 94	22 94	95	1 58
Leeds	23 01	8 96	2 55	5 09	39 31	27 10	1 43	2 12
Lennox & Addington	20 09	9 08	2 33	4 62	36 12	24 92	1 38	1 81
Lincoln	50 54	21 93	4 85	6 78	84 10	39 17	2 32	2 92
Manitoulin	4 36	1 77	67	2 19	8 99	25 26	51	1 39
Middlesex	39 67	14 39	3 48	8 92	66 46	34 34	2 15	2 62
Muskoka	3 80	1 54	55	1 37	7 26	30 52	44	1 70
Nipissing	3 71	1 00	42	82	5 95	23 53	48	2 11
Norfolk	28 11	12 00	3 18	5 43	48 72	31 48	2 02	2 53
Northumberland	29 29	12 29	3 03	6 09	50 70	27 26	1 81	2 26
Ontario	32 63	12 91	3 17	7 70	56 41	33 02	2 31	2 73
Oxford	43 06	17 26	3 86	9 51	73 69	37 91	2 51	3 12
Parry Sound	3 28	1 33	45	1 26	6 32	26 39	44	1 73
Peel	39 84	16 89	3 63	8 06	68 42	32 47	2 35	2 78
Perth	39 78	15 62	4 00	9 35	68 75	35 35	2 15	2 53
Peterborough	16 45	5 31	1 59	3 78	27 16	24 73	1 20	2 11
Prescott	23 78	9 56	2 82	5 26	41 42	30 49	1 49	2 07
Prince Edward	29 19	13 67	3 76	5 63	52 25	27 61	1 80	2 15
Renfrew	10 65	4 00	1 26	2 92	18 83	26 30	1 30	2 40
Russell	20 19	6 03	2 26	4 37	32 85	31 21	1 70	2 28
Simcoe	25 73	9 53	2 77	5 86	43 89	29 38	1 89	2 48
Stormont	23 15	11 63	3 12	5 58	43 48	35 29	1 42	2 12
Victoria	17 44	6 30	1 83	4 45	30 02	27 40	1 61	2 21
Waterloo	39 54	17 54	4 16	7 56	68 80	35 96	2 26	2 62
Welland	35 09	16 01	3 70	6 16	60 96	32 39	1 75	2 04
Wellington	31 16	12 94	3 22	8 17	55 49	32 11	1 90	2 38
Wentworth	48 00	19 87	4 71	7 97	80 55	41 34	2 52	3 05
York	46 30	17 00	3 68	7 62	74 60	35 10	2 82	3 25
The Province:								
1901	24 76	9 59	2 53	5 48	42 36	30 96	1 77	2 46
1900	24 37	9 31	2 43	5 23	41 34	30 09	1 80	2 48
1899	24 02	9 10	2 34	4 94	40 40	29 31	1 77	2 51
1898	23 78	8 98	2 26	4 44	39 46	28 23	1 76	2 50
1897	23 72	8 82	2 20	4 01	38 75	27 31	1 73	2 44
1896	24 06	8 85	2 19	4 18	39 28	27 84	1 88	2 54
1895	24 79	8 83	2 20	4 50	40 32	28 89	1 87	2 59
1894	25 49	8 86	2 23	4 84	41 42	29 86	1 88	2 65
1893	26 25	8 72	2 24	5 05	42 26	30 31	2 00	2 72
1892	26 91	8 55	2 23	5 13	42 82	30 38	1 98	2 74

MARKET PRICES.

TABLE XXVI. The following table is compiled from thirty-two well distributed market points. The figures for the six months, July-December, 1901, are also given, together with the average price for the past ten years, and the average for twenty years.

Markets.	Fall wheat, per bush.	Spring wheat, per bush.	Barley, per bush.	Oats, per bush.	Peas, per bush.	Beans, per bush.	Rye, per bush.	Buckwheat, per bush.	Corn (in ear) per bush.	Hay, per ton.	Potatoes, per bush.	Wool, per lb.
	cts.	cts.	cts.	cts.	cts	cts.	c'ts.	cts.	cts.	$ c.	cts.	cts.
Barrie	63 7	.....	44.3	35.1	69.3	.....	46 3	47.3	.....	3 17	33 3	12.5
Belleville	62.2	62.2	48 2	34 4	65 0	....	48 9	.....	.....	7 73	37.8	11.1
Bowmanville	64.3	64.3	47 1	35.1	61 6	....	51 2	48.3	.....	8 79	33.1	.....
Brampton	65.6	.....	45 0	35.3	63 2	.....	.....	.....	.....	8 46	42.2	.....
Brantford	63.1	63.1	42 5	34 7	58 5	.....	46.9	47 8	36 7	7 19	47.1	.....
Brockville	.....	80 0	.....	39 1	.....	.....	57 7	52.5	43 8	8 03	40.0	17.0
Cayuga	64 3	.....	42 1	33 3	60.7	.....	45 2	.....	.....	.....	50 0	14.0
Chatham	67.2	.....	43.5	34.3	.....	112 9	46.5	41 5	34.1	6 50	68 0	13.6
Cobourg	66.1	66.1	46 9	34 7	69 0	.....	49.8	47.2	.....	8 55	33 3	.....
Essex	64 0	.....	40 8	34 8	86 7	.....	.....	.....	35 1	9 00	45.3	.....
Forest	64.0	.....	42 8	33 7	54 0	70.0	40.0	.....	28 5	5 78	.....	.....
Galt	65 9	65.9	42 5	34 0	61.7	.....	.....	.....	.....	7 71	35 9	16 5
Goderich	63 8	.....	40 6	34 6	64.0	.....	46 9	48 3	.....	9 27	33.9	.....
Guelph	67.1	....	48 7	37.8	67.7	.....	51 8	.....	43.9	7 59	35.9	12.0
Hamilton	70 8	.....	47.8	39.3	64.8	.....	49.6	.....	.....	7 27	47.5	12.3
Kingston	64 5	65.0	47.5	32.6	66 5	.....	50 0	48.0	.....	11 50	51.1	13.0
Lind-ay	65.3	65.3	43.2	35.0	68.2	.....	46.0	47 3	.....	6 13	35.7	13.5
London	68.7	68 7	47 4	37.3	63.4	111.8	55 7	48 7	40 2	7 83	46 6	13.6
Orangeville	64.6	64 6	44 8	35.9	68 6	.....	47 6	47.5	.....	7 02	33.6	11.5
Ottawa	.....	60.9	52.4	41 4	66 0	158.8	57.1	52 8	47.1	8 50	49 7	13 5
Owen Sound	65.9	65 1	46 8	38 5	67.3	.....	.....	45.8	.....	7 49	47.2	12 0
Pembroke	72 5	72 5	45 0	38 8	66 6	166.7	50.8	.....	.....	7 79	45 9	16.4
Perth	70 2	69.6	41 0	35.6	62 1	.....	45.0	47.0	.....	.....	37.2	14 5
Peterborough	66 2	66.0	44 5	36 1	71.6	.....	47.1	50.3	.....	8 00	37 8	.....
St. Thomas	67.1	.....	40 6	34.0	55.0	.....	.....	.....	30.9	7 07	49 7	11.8
Simcoe	66 5	.....	45 3	37.0	66.7	.....	49.9	50.3	37.1	6 67	45 3	.....
Stratford	63.6	.....	40 8	34.0	61.9	.....	.....	.....	.....	7 17	40.5	.....
Toronto	70 1	68 1	51 1	41.2	71.1	.....	52.1	52.7	.....	11 03	44 3	12 8
Walkerton	64 0	64 0	40 7	36 1	67.4	.....	.....	.....	.....	7 00	37.8	14.0
Waterloo	65.0	.....	48 0	36.1	58 1	.....	.....	.....	.....	7 76	.....	.....
Whitby	62.0	62 0	45.1	33 7	64.7	.....	50.0	48.0	.....	8 50	45.5	13.5
Woodstock	67.0	....	43.2	36.7	62 8	.....	49 8	.....	40.5	7 20	42.5	12.5
The Province:												
July	64.0	65 8	41 0	31.5	61.5	.....	47.0	.....	.....	8 07	....	13.7
August	64 3	65 8	41 8	33 6	62.4	.....	47 7	.....	.....	7 70	..	13.6
September	65.1	66.4	43.7	34.1	64 0	.....	49 0	.....	.....	7 83	...	13 3
October	65 4	66 2	45.4	35 0	65.1	131.7	49 4	46.6	37.7	7 96	42.9	13.1
November	66 9	67.0	47 5	39.7	67.2	123 0	50 0	48 5	36 7	8 17	41.3	13.2
December	71.0	69.5	49.9	43.4	71.4	118.5	52.4	49.9	39.8	8 24	43 7	13 2
Average for six months:												
1901	66.1	66 8	45.0	36 2	65.3	125.0	49.3	48.4	38 0	7 99	42.6	13.4
1900	66.4	67 5	38.9	26.5	57.1	99.7	48 5	43.7	31.7	8 48	26.1	15.4
1899	66.7	66.5	39 5	27 7	57.3	108 0	50.0	45.5	19.8	7 72	32.8	14.3
1898	69.4	69.2	38 0	25 8	52.2	70.0	43.5	38 2	20 1	6 22	44.1	16.6
1897	78.2	78.6	27 0	22 6	42.1	65.2	37 7	30 0	19 7	7 18	39 9	18.4
1896	71.0	70.6	31 6	20 0	44 0	68.4	36.6	30 5	19 6	9 68	26 2	18.4
1895	69 3	69 8	40.0	29 1	54 8	94.7	45 6	36 8	22 6	12 30	20 2	20.0
1894	55.0	55.5	40.5	30 8	53.6	110.4	44.2	39.2	26.1	7 56	35.4	16.9
1893	59 9	59.4	40 1	33.2	54 0	118 0	47 5	41.8	26.5	7 64	39.5	18.2
1892	70.7	67.8	41.3	30 8	59 0	98 8	55 8	42.2	26.3	8 20	50 4	18.2
1882-1901	78.7	81 2	48 0	31.3	57.5	101.4	51 6	39.7	*25.0	9 06	39.4	17.9

* Average for the ten years, 1892-1901.

CHEESE FACTORIES.

TABLE XXVII. Showing by county Municipalities of Ontario the number of cheese factories in operation, the quantity and value of cheese made, the number of patrons and the amount paid to patrons by milk delivered at the factories in 1901, together with the totals for the Province for the past ten years.

Counties and districts.	Factories in operation.	Quantity of—		Gross value of cheese.	Average number of patrons.	Milk to make 1 lb. of cheese.	Value of cheese per 100 lb.	Amount paid to patrons for milk at the factory.	
		Milk used.	Cheese made.					Total.	Per 100 lb. milk.
		lb.	lb.	$		lb.	$ c	$	cts.
Algoma & Manitoulin.	3	976,878	94,512	8,643	102	10.34	9 14	7,603	77.8
Brant	9	9,952,2 9	901,654	81,108	542	11.04	9 00	70,598	70.9
Bruce	15	17,456,809	1,588 919	144,266	1,193	10 99	9 08	129,477	74 2
Carleton	58	55,548,700	5,345,879	492,.94	2,308	10.39	9 21	430,155	77.4
Dufferin	3	3,523,149	322,068	29,083	209	10 94	9 03	25,247	71 7
Dundas	58	73,107,461	7,044,181	644,711	1,8 9	10.36	9 15	570,274	78 0
Durham	13	14,305,622	1,300,386	117,650	990	11.00	9 05	103,474	72.3
Elgin	20	43 096,116	3,924,891	350,516	1,748	10.98	8 93	311,851	72 4
Essex	5	2.090,650	188,865	17,110	239	11.07	9 06	15,333	73 3
Frontenac	70	64,805,597	6,195,526	564 310	2,302	10 46	9 11	497,518	76.8
Glengarry	70	55,740,691	5,359,861	488,771	1,956	10.40	9 12	427 308	76 7
Grenville	38	56,232,860	5,257,520	482.724	1,881	10 70	9 18	410,652	73.3
Grey	7	4,524,834	422,650	38,072	382	10 70	9 01	32,778	72.4
Haldimand	11	10,866,400	1,000,833	89,221	948	10.86	8 91	78,623	72.4
Haliburton	6	1,963,191	188,316	17,036	121	10 42	9 05	13.600	69.3
Hastings	94	118,283,603	11,132,286	1,009 048	4,159	10 63	9 06	900,013	76.1
Huron	14	15,318,576	1,401,103	126,061	1,182	10.93	8 99	113,430	74 0
Kent	4	2,908,256	264,312	23,661	253	11.00	8 95	20,032	68 9
Lambton	15	12,872,979	1,181,319	105 801	1,163	10.90	8 96	91,362	71.0
Lanark	44	60,830,3 6	5,688,763	524,287	2,451	10 61	9 22	465,266	77.1
Leeds	80	109,565,709	10,373,751	944,269	2,622	10.56	9 10	836 898	76.4
Lennox & Addington	33	53 931,687	5,194,147	465,848	2,476	10 38	8 97	409,093	75 9
Lincoln	4	3.730,868	347 268	30,874	370	10 74	8 89	27,095	72.6
Middlesex	32	57,728,869	5,267,130	475,908	2,116	10 96	9 04	423,406	73 3
Muskoka	3	958,574	88,830	8,235	75	10 79	9 27	6,906	72.0
Nortolk	24	29,217,7 5	2,675,756	238,817	2,069	10 92	8 93	210,744	72.1
Northumberland	40	62,497,523	5,710,642	513,014	2,874	10 94	8 98	448,816	71.8
Ontario	5	1.290,926	121,328	12,258	160	10 64	10 10	10,436	80.8
Oxford	45	106,872,242	9,766,553	887,217	3,326	10.94	9 08	796,084	74.5
Parry Sound and Nipissing	4	1,127 043	106 363	9,943	96	10.59	9 35	8 390	74 4
Peel and Halton	4	1 803,005	169 852	15,218	75	10 62	8 99	13,158	73.0
Perth	25	49,566,136	4,520 767	411,502	2,378	10.96	9 10	363,902	73.4
Peterborough	38	47,382,928	4,361,693	399,105	2,185	10.86	9 15	349,868	73.8
Prescott	68	54,924,734	5,418,784	490.394	2,050	10 14	9 05	425,109	77 4
Prince Edward	22	37,005,624	3,501,840	318,853	1,705	10.57	9 10	280 699	75 9
Renfrew	26	22,450,815	2,145,511	194,769	1,298	10 46	9 07	167,761	74.7
Russell	50	42,018,468	4,178 801	383,801	1,636	10 06	9 18	335,549	79 9
Simcoe	11	5,412,234	496,896	44,734	461	10 89	9 00	37,931	70.1
Stormont	49	71,619,727	6,935,673	636,185	2,252	10 33	9 17	566 617	79.1
Victoria	20	20,460,336	1,905,352	175,394	1,218	10.74	9 20	154,744	75.6
Waterloo	7	7,317,412	673,898	60,755	425	10 86	9 02	52,891	72 3
Welland	3	2,671,495	246,315	22.098	284	10 85	8 97	19,287	72.2
Wellington	9	13,535,631	1,237,893	113,079	764	10 93	9 10	100,424	74.2
Wentworth	6	6,264,814	571,816	51,282	473	10 96	8 97	45.012	71.8
York	2	1,292,338	120,904	11,248	91	10.69	9 30	9,134	70.7
The Province:									
1901	1,167	1,434,540,520	134,942,517	12,269,073	59,377	10 63	9 09	10 814,538	75.4
1900	1,173	1,366,433,190	127,789,513	13,023,025	59,294	10 61	10 19	11,682,470	85.5
1899	1,203	1,311,530,9 7	123,324,923	12,120,887	60 443	10 63	9 83	10,682,193	81.4
1898	1,187	1,374,399 489	128,116,924	10,252,240	65,121	10 73	8 00	8,417,535	61.2
1897	1,161	1,455,937,148	137,362,916	11,719,468	66,104	10 60	8 53	9,709 004	66 6
1896	1,147	1,108,124,6 9	104,393,985	8 646,735	57,635	10 62	8 28	7,040,927	63.5
1895	1,164	1,174 068,592	109,230,340	8,607,389	65,661	10 75	7 88	6 922,962	59.0
1894	1,011	1,027,577 831	97,284,547	9,441,247	54,839	10.56	9 70	7,931,022	77.2
1893	897	911,791,204	86,166 719	8.338,709	50,870	10.58	9 68	.....	....
1892	856	984,356,444	95,848,948	8 959,939	48,601	10 49	9 55	.....	....

AGRICULTURAL STATISTICS OF THE UNITED STATES.

FARMS AND FARM ACREAGE, 1850 TO 1900.

Year.	Number of farms.	Number of acres in farms.				Per cent. of farm land improved.
		Total.	Improved.	Unimproved.	Average.	
1900	5,739,657	841,201,546	414,793,191	426,408,355	146.6	49.3
1890	4,564,641	623,218,619	357,616,755	265,601,864	136.5	57.4
1880	4,008,907	536,081,835	284 771,042	251.310 793	133.7	53.1
1870	2,659,985	407 735,041	188,921,099	218,813,942	153.3	46.3
1860	2,044,077	407,212,538	163,110,720	244,101,818	199.2	40.1
1850	1,449,073	293,560,614	113,032,614	180,528,000	202.6	38 5

VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND OF FARM PRODUCTS, 1850 TO 1900.

Year.	Total value of farm property.	Land improvements and buildings.	Implements and machinery.	Live stock.	* Farm products.
	$	$	$	$	$
1900	20,514,001,838	16,674,690,247	761,261,550	†3,078,050,041	4,739,118.752
1890	15,982,267.689	13,279,252.649	494.247,467	†2,208,767,573	2,460,107,454
1880	12,104,001,538	10,197,096,776	406,520.055	1,500,384,707	2,212,540,927
1870	‡11,124,958,747	9.262,803,861	336,878,429	1,525,276,457	§2,447,[illegible]38,658
1860	7,980,493,063	6,645,045,007	246,118,141	1,089,329,915	
1850	3,967,343,580	3,271,575,426	151,587,638	544,180,516	

* For year preceding that designated.
† Exclusive of the value of live stock on ranges.
‡ Values for 1870 were reported in depreciated currency. To reduce to specie basis of other years they must be diminished one-fifth.
§ Includes betterments and additions to stock.

The following figures for the United States are furnished by the Statistician of the Department of Agriculture at Washington. (May 23, 1902.)

WHEAT.

	Acres.	Bushels.	Farm value.
			$
1901	40,895,514	748,460,218	467,350,156
1900	42,495,385	522,229,505	323,525,177
1899	44,592,516	547,303,846	319,545,259
1898	44,055,278	675,148,705	392,770,320
1897	39,465,066	530,149,168	428,547,121
1896	34 618,646	427,684,346	310,602,539
1895	34,047,332	467,102,947	237,938,998
1894	34,882,436	460,267,416	225.902,025
1893	34,629,418	396,131,725	213,171,381
1892	38,554 430	515,949,000	322,111,881
1891	39,916,897	611,780,000	513,472,711

CORN.

	Acres.	Bushels	Farm value.
			$
1901	91,349,928	1,522,519,891	921,555,768
1900	83,320,872	2,105,102,526	751,220,034
1899	82,108,587	2,078,143,933	629,210,110
1898	77,721,781	1,924,184,660	552,024,428
1897	80,095,051	1,902,967,933	501,07[illegible],952
1896	81,027,156	2,283,875,165	491,006,967
1895	82,075,830	2,151,138,580	544,986,534
1894	62,582,269	1,212,770,052	554,719,162
1893	72,036,465	1,619,496,131	591,625,627
1892	70,626,658	1,628,464,000	64[illegible],146,640
1891	76,204,515	2,060,154,000	836,439,28[illegible]
1881*	64,262,025	1,194,916,000	759,482,170

* Most serious crop failure of the generation.

OTHER CROPS, 1901.

	Acres.	Bushels.	Farm value.
			$
Oats	28,541,476	736,808,724	293,658,777
Barley	4,295,744	109,932,924	49 705,163
Rye	1,987,505	30,344,830	16.909,742
Buckwheat	811,164	15,125,941	8,523,318

In the preparation of the report for 1901, all proper weight has been given to the recently published census report on the crops of 1899.

CROPS IN THE NORTHWEST TERRITORIES.

Year.	Wheat.		Oats.		Barley.	
	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.
1898	307,580	5,542,478	105,077	3,040,307	17,092	449,512
1899	363,523	6.915,623	134,938	4,686,036	14,276	337,421
1900	412,864	4.028,294	175,439	4,226.152	17.044	353,216
1901	504,697	12,808,447	296,568	9,716,132	24,702	795,100
1902	584,988		276,152		29,772	

CROPS IN MANITOBA.

Year.	Wheat.		Oats.		Barley.	
	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.
1898	1,488.232	25,313,745	514,824	17,308 252	158,058	4.277,927
1899	1,629 995	27,922,230	595,136	22,3 8,378	189 912	5,379.156
1900	1,457.396	13,025.252	429,108	8,8 4,312	155,111	2 939,477
1901	2,011,835	55,502,085	689,951	27,796,588	191,009	6,536 155
1902	2,039,940		725,060		329,790	

PART II.—CHATTEL MORTGAGES.

Table showing by County Municipalities of Ontario the total number and amount of Chattel Mortgages on record and undischarged on December 31st, 1901, against (1) all occupations ; (2) farmers ; together with totals for the Province for the past ten years.

Counties and Districts.	Chattel Mortgages Against all Occupations.				Chattel Mortgages Against Farmers.			
	To secure existing debt.		For future indorsation.		To secure existing debt.		For future indorsation.	
	No.	Amount	No.	Amount.	No.	Amount.	No	Amount.
				$		$		$
Algoma	182	133,244	....	.....	98	23,972	....	.....
Brant	339	266,025	....	.....	112	76 235	....	.....
Bruce	633	251,954	....	..	422	117,362	..	..
Carleton	656	377,836	7	5,126	89	31,519	1	700
Dufferin	180	73,687	....	.....	152	60 445	....	.....
Elgin	474	196,217	....	.....	209	68,052	....	.....
Essex	355	110,990	2	1,125	158	29,653	....	.....
Frontenac	359	160,725	....	.....	192	76 814	....	.....
Grey	780	281,391	1	500	595	154.515	....	.....
Haldimand	153	55,153	....	.....	127	37.843	....	.....
Haliburton	56	17.040	1	10,000	47	5,449	....	.....
Halton	106	80,782	4	690	55	32,494	....	.....
Hastings	669	266,712	41	9,380	512	150,619	29	3,622
Huron	331	219,198	7	1,974	179	74 567	2	933
Kent	1,038	332,241	....	.....	792	183 414	....	.....
Lambton	401	178 842	73	23,995	233	61,109	58	11,716
Lanark	198	89 184	15	6,043	95	37,986	7	2 884
Leeds and Grenville	332	126,536	9	11,834	200	48,356	6	3,618
Lennox and Addington	210	89,748	4	4.200	122	56.562	2	500
Lincoln	220	125,172	8	6,638	86	26 680	3	277
Manitoulin	97	41,531	....	.....	80	18.778	....	.....
Middlesex	620	298 484	....	.....	224	103,163	....	.....
Muskoka	188	84 148	3	4,000	113	21,104	1	1,000
Nipissing	308	487,866	1	151	145	25,956	1	151
Norfolk	226	58,280	....	.....	152	35 752	....	.....
Northumberland and Durham	235	87,919	....	....	164	66 899	....	.....
Ontario	333	382,678	6	1,272	214	255,169	4	1,210
Oxford	245	182,626	2	6,417	106	42 101	....	.....
Parry Sound	136	445 997	....	.....	72	13,460	....	.....
Peel	152	99,145	4	742	96	65,234	3	645
Perth	187	147.000	....	.....	93	51,416	....	.....
Peterborough	271	140,068	2	26,059	149	54.299	....	.....
Prescott and Russell	168	47,907	....	.....	112	31,530	....	.....
Prince Edward	164	117.6 6	3	394	115	40,923	2	260
Rainy River	88	109.896	....	.....	16	5.430	....	.....
Renfrew	227	87,405	8	13,064	159	58,411	3	791
Simcoe	501	887,909	....	.....	302	182 869	....	.....
Stormont, Dundas and Glengarry	246	90,178	18	3,104	135	40,354	8	1,392
Thunder Bay	48	45,275	6	40 634	9	3,308	1	134
Victoria	201	122 776	....	.....	150	63 975	....	.....
Waterloo	289	219,633	2	8,400	57	29,676	....	.....
Welland	266	122,479	2	9,858	89	18,058	....	.....
Wellington	322	184,410	....	.....	146	82,151	....	.....
Wentworth	818	354 056	9	25,505	139	69,429	2	374
York	2,341	2,335,605	9	16,340	245	121,608	1	.....
The Province :								
1901	16 299	10,613,564	247	237 445	7,757	2 854,759	131	30 207
1900	17,321	11,669,806	307	499,184	8,440	3,110 543	121	30,840
1899	18,216	11,067,664	291	324,628	9,392	2 938 853	124	34 798
1898	19,526	12 001 075	283	281.142	10 514	3,547 554	117	32.943
1897	21,144	13,004,342	382	377,853	11,902	3,889,190	201	44,410
1896	21.402	13.180,205	387	381 511	11,638	3,826,582	206	51 416
1895	22 018	10,555,922	373	456 398	12,121	3 711,238	167	56,258
1894	21,276	10 603,393	483	616 819	11 447	3,378 079	240	68,805
1893	19 342	8,973,118	380	360.267	10,489	3,003,109	195	56,748
1892	18,927	9,215,753	455	829,724	10,576	3,062,349	198	55,628

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ANNUAL REPORT

OF THE

BUREAU OF INDUSTRIES

FOR THE

PROVINCE OF ONTARIO

1901.

PART III.—MUNICIPAL STATISTICS

(PUBLISHED BY THE ONTARIO DEPARTMENT OF AGRICULTURE, TORONTO.)

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PART III.—MUNICIPAL STATISTICS.

The following statement is compiled from the summarized tables and gives population, total assessment, amount of taxes imposed for 1901, the amount of debenture and floating debt, together with the amount paid each year by all municipalities of the Province for interest for the fifteen years 1886-1900.

Year.	Population.	Total assessment.	Taxes imposed for all purposes.			Debenture debt.		Floating debt.	Interest paid on loans and debentures.
			Total.	Rate per head.	Mills on the dollar	Total.	Rate per head.		
		$	$	$ c.		$	$ c.	$	$
1901	2,028,889	835,697,607	13,341,355	6 58	16.0	*	*	*	*
1900	2,013,860	822,435,670	12,992,821	6 45	15.8	57,172,802	28 39	7,768,033	2,652,749
1899	2,010,748	816,765,473	12,535,284	6 23	15 35	56,389,603	28 04	6,302,266	2,508,955
1898	2,001,350	809,184,833	12 222,966	6 10	15.11	54,506,372	27 11	6,883,735	2,633,762
1897	1,990,977	803,625,377	12,206,325	6 13	15.19	53,577,475	26 91	6,482,953	2,553,988
1896	1,972,286	814,917,633	12,122,785	6 15	14.88	52,948,275	26 85	6,261,394	2,588,759
1895	1,957,390	821,466,166	12,316,429	6 29	14.99	51,895,991	26 51	5,834,129	2,578,220
1894	1,936,219	826,179,370	12,320,312	6 36	14 91	49,724,587	25 68	6,669,567	2,552,607
1893	1,910,059	825,530,052	12,512,660	6 56	15.17	48,083,243	25 17	6,796,422	2,508,621
1892	1,909,527	825.211,127	11,803,570	6 18	14.30	47,166,962	24 70	6,469,899	2,482,156
1891	1,922,121	818,847,394	11,767,748	6 12	14.37	43,888,853	22 83	7,629,730	2,498,294
1890	1,917,544	798,676,271	10,897,485	5 68	13 65	40,720,985	21 24	8,387,186	2,240,692
1889	1,906,901	761,905,816	10,249,198	5 37	13.45	38,988,332	20 44	6,493,519	2,057,938
1888	1,880,145	748,654 570	9,919,982	5 28	13.25	34,729,527	18 47	6,457,363	1 999,760
1887	1,848,457	717,311,938	9,300,118	5 03	12.97	31,943,320	17 28	5,645,208	1,820,590
1886	1,828 495	694,380,659	9,009,385	4 93	12.97	29,924 863	16 37	4 841,717	1,715,620

* Statistics of debts for 1901 are not yet complete.

The following tables show the variations in population, assessment, taxation and debenture debt according to the various classes of municipalities, since the Bureau has been receiving returns direct from municipalities :

POPULATION.

Year.	Townships.	Towns.	Villages.	Cities.	Total.
1901	1,092,181	330,412	126,836	479.460	2,028,889
1900	1,095,222	326,041	124,637	467,960	2,013,860
1899	1,109,806	318,145	133,921	448,876	2,010,748
1898	1,110,894	314,820	134,747	440,889	2,001,350
1897	1,113,530	312,947	133,560	430,940	1,990,977
1896	1,112,900	306,001	132,451	420,934	1,972,286
1895	1,109,631	300,655	130,889	416,215	1,957,390
1894	1,103,828	297,194	126,387	408,810	1,936,219
1893	1,096,984	292,285	123,125	397,665	1,910,059
1892	1,102,467	291,706	121,690	393,664	1,909,527
1891	1,116,347	287,854	122,691	395,229	1,922,121
1890	1,118,252	410,530		388,762	1,917,544
1889	1,130,060	400,890		375,951	1,906,901
1888	1,133,046	393,461		353,638	1,880,145
1887	1,140,138	377,389		330,930	1,848,457
1886	1,148,856	360,005		319,634	1,828,495

In 1900 there were 501 township municipalities, 102 towns, 136 villages, 14 cities and 38 counties.
" 1901 " 505 " " 104 " 135 " 14 " 38 "

TOTAL ASSESSED VALUE.

Year.	Townships.	Towns.	Villages.	Cities.	Totals.
	$	$	$	$	$
1901	458,811,926	99,921,377	29,849,933	247,114,371	697,697,607
1900	454,187,053	96,816,673	29,082,283	242,349,661	822,435,670
1899	450,952,948	95,008,798	30,073,357	239,825,370	816,760,473
1898	448,810,060	93,529,372	30,768,025	236,077,376	809,184,833
1897	444,722,478	91,488,546	30,497,707	236,966,646	803,625,377
1896	447,117,383	91,269,208	30,005,839	246,525,203	814,917,633
1895	448,417,259	93,646,835	29,711,010	249,691,062	821,466,166
1894	451,476,103	93,065,465	29,007,928	252,629,874	826,179,370
1893	451,629,103	94,213,304	28,463,366	251,224,279	825,530,052
1892	452,065,658	93,867,423	28,043,948	251,234,098	825,211,127
1891	454,070,364	92,555,035	27,820,773	244,401,222	818,847,394
1890	452,467,088	115,402,233		230,746,950	798,616,271
1889	450,977,220	106,453,798		204,474,798	761,905,816
1888	460,615,822	100,413,029		187,625,719	748,654,570
1887	456,170,163	93,337,596		167,804,179	717,311,938
1886	452,097,645	88,078,093		154,204,921	694,380,659

TAXES IMPOSED FOR ALL PURPOSES.

Year.	Townships.	Towns.	Villages.	Cities.	Total.
	$	$	$	$	$
1901	4,862,630	2,330,691	589,798	5,558,236	13,341,355
1900	4,696,255	2,180,238	564,750	5,551,578	12,992,821
1899	4,621,803	2,106,178	585,376	5,221,947	12,535,284
1898	4,461,474	2,095,791	570,912	5,094,789	12,222,966
1897	4,407,005	2,069,444	569,884	5,160,592	12,206,925
1896	4,292,741	2,005,133	557,003	5,267,909	12,122,785
1895	4,473,269	2,021,455	544,111	5,277,594	12,316,429
1894	4,579,044	1,955,980	526,813	5,258,475	12,320,312
1893	4,629,028	1,944,221	505,231	5,444,180	12,522,660
1892	4,599,442	1,876,420	499,575	4,828,133	11,803,570
1891	4,544,291	1,811,517	493,508	4,918,432	11,767,748
1890	4,473,108	2,161,644		4,262,733	10,897,485
1889	4,507,717	1,993,623		3,746,858	10,248,198
1888	4,494,780	1,884,918		3,540,264	9,919,962
1887	4,431,720	1,759,248		3,109,145	9,300,113
1886	4,388,401	1,670,848		2,950,136	9,009,385

DEBENTURE DEBT OUTSTANDING.

Year.	Townships.	Towns.	Villages.	Cities.	Counties.	Total.
	$	$	$	$	$	$
1900	2,554,167	11,690,536	1,187,919	40,022,189	1,717,991	57,172,802
1899	2,616,584	10,815,169	1,159,898	40,026,264	1,771,688	56 389,603
1898	2,649,698	10,344,650	1,224,440	38,506,528	1,781,056	54,506,372
1897	2,917,091	9,850,615	1,160 285	37,846,377	1,803,107	53,577,475
1896	2,866,904	9,598,063	1,163,096	37,471,230	1,848,982	52,948,275
1895	2,992,643	9,090,368	1,175,803	36,452,914	2,184,263	51,895,991
1894	2,942,267	8,611,052	1,132,942	34,778,154	2 260,172	49,724,587
1893	3,039,823	8,222,289	1,082,476	33 399,063	2,339,592	48,083,243
1892	3,089,430	7,491,878	1,087,468	32,966,371	2,531,815	47,165,962
1891	3,118,639	6,775,715	993,945	30,253,043	2,747,511	43,888,853
1890	3,366,617	7,099,648		27,110,712	3 144,008	40,720,985
1889	3,299,557	6,371,763		26,096,152	3,220,860	38,988,332
1888	3,409,744	6,146,561		21,769,261	3,403,961	34 729,527
1887	3,154,428	5,261,078		20,080,923	3,446,891	31,943,320
1886	3,153,646	4,795,580		18,469,893	3,505,744	29,924,863

FINANCIAL STATEMENT—ONTARIO MUNICIPALITIES.

Summary statement showing for all Municipalities in Ontario (including counties, townships, cities, towns and villages), the total of the several items of receipts, disbursements, assets and liabilities for the ten years ending December 31st, 1891-1900.

Schedule.		1900	1899.	1898.	1897.	1896.	1895.	1894.	1893.	1892.	1891.
RECEIPTS.		$	$	$	$	$	$	$	$	$	$
Balance from previous year	*a*	1,645,145	1,849,739	1,641,559	1,728,747	1,648,455	1,314,226	1,356,761	1,698,895	1,613,373	1,361,843
Ordinary municipal revenue:											
Municipal and school taxes	*b*	13,203,140	12,669,127	12,217,687	12,178,312	11,881,641	12,159,570	12,148,097	11,975,445	11,820,733	11,377,699
Licenses (liquor and other)	*a*	322,151	338,142	331,603	337,530	334,559	344,036	836,158	856,929	841,789	776,564
Fees, rents, tolls, fines, etc	*a*	575,683	533,076	501,409	483,134	514,408	480,160				
Water rates, electric light or gas rates, etc	*c*	1,349,986	1,401,458	1,289,755	1,242,235	1,187,751	1,151,102	1,118,410	995,429	894,858	955,299
Surplus fees from registrar	*d*	16,131	11,716	10,957	15,292	16,951	13,626	13,351	16,365	19,636	20,270
Rates from local municipalities	*d*	1,099,357	1,110,356	1,047,924	1,097,689	1,111,043	1,243,999	1,258,660	1,231,039	1,372,862	1,303,572
Subsidies and refunds:											
Received from Government on account of—											
Schools	*d*	142,954	149,361	147,418	149,606	142,717	144,095	142,180	139,714	140,461	143,050
Administration of justice	*d*	147,437	144,228	146,726	180,877	169,304	161,820	141,868	122,261	120,658	144,545
Refund of loans, investments and special deposits	*a*	1,444,024	2,695,613	2,451,302	2,232,984	1,790,130	1,120,830	1,721,963	1,240,663	949,153	1,714,189
Interest and dividends	*a*	514,873	500,273	493,578	451,879	432,287	391,064				
Loans:											
Money borrowed for current expenses	*a*	6,807,547	5,525,298	5,205,349	4,892,579	4,516,049	4,592,405	5,483,286	5,711,383	6,108,802	7,161,248
Money borrowed on debentures (face value) for—											
School purposes	*a*	165,842	156,105	338,993	162,866	253,325	366,686	214,074	223,697	571,416	309,205
Other purposes	*a*	3,031,113	4,079,658	4,267,653	3,785,949	4,137,606	3,953,322	5,759,403	4,266,935	4,145,758	5,181,465
Non-resident taxes collected	*d*	42,540	55,524	73,120	81,235	71,176	99,044	89,459	95,026	103,997	107,513
Towns or cities separated from counties	*d*	89,910	81,535	79,175	97,267	107,562	95,797	102,615	96,147	98,139	94,891
Miscellaneous	*a*	458,722	567,932	677,370	660,422	672,585	543,264	568,275	743,335	1,024,394	2,075,473
Totals		31,056,555	31,869,141	30,921,578	29,776,603	28,987,549	28,175,046	30,953,960	29,413,263	29,826,054	32,726,826
DISBURSEMENTS.											
Expenses of municipal government:											
Attendance at meetings of council and committees	*d*	39,616	44,548	38,934	43,443	72,772	62,740	67,512	67,100	63,959	67,920
Allowances, salaries and commissions	*a*	773,736	772,441	709,169	717,526	719,371	696,548	673,268	693,808	687,239	684,306
Lighting of streets, water supply, fire protection	*c*	1,623,999	1,449,992	1,490,253	1,346,008	1,337,712	1,372,206	1,369,531	1,271,427	1,150,242	1,179,794
Law costs (including salaries)	*a*	157,984	137,986	149,569	156,287	143,877	176,121	614,722	632,230	548,639	536,220
Other expenses of municipal government	*a*	529,808	503,775	467,339	445,967	451,167	465,008				
Construction works:											
Roads, bridges, streets and parks	*a*	3,764,935	3,346,476	2,675,774	2,680,976	2,130,304	2,446,801	2,683,713	3,168,127	3,259,808	3,334,087
Water and electric light works	*c*	1,358,820	1,195,405	812,117	824,418	769,365	847,599	1,238,794	1,392,689	1,455,008	1,683,716
Buildings and other works	*a*	334,133	529,596	713,208	719,966	697,881	377,010				
Drainage works	*e*	284,553	327,578	311,311	275,869	238,919	227,692	297,286	275,941	237,215	275,551

Schedule.		1900.	1899.	1898.	1897.	1896.	1895.	1894.	1893.	1892.	1891.
		$	$	$	$	$	$	$	$	$	$
Administration of justice, gaols, police, etc	*f*	1,084,909	1,072,526	1,066,013	1,066,070	1,054,505	1 077,891	1,045,597	997,080	1,017,392	1,021,520
Support of the poor and other charities	*a*	405,953	381,554	365,071	363,608	333,423	321,965	323,288	298,040	308,137	311,567
County treasurer for levy	*a*	1,083,298	1,105,537	1,043,123	1,093 505	1,117,906	1,228,096	1,222,835	1,231,824	1,355,698	1,279,609
Payments on account of schools and education	*a*	4,694,876	4,380,777	4,434 194	4,258,034	4,277,033	4,296,862	4,239,625	4,269,723	4,228,004	4,141,417
Sinking Fund investments and deposits	*a*	1,266,082	2,675,969	2,473.950	2,501,517	1,969,668	1,699,407	1,846,747	1,813,254	1,452,747	1,231,320
Other investments and special deposits	*a*	753,507	501,007	436,681	393,364	545,255	290,121				
Loans repaid :											
Debentures redeemed (principal) .... { School....	*a*	181,157	163,722	216,858	183,014	215,984	187,526	4,424,647	3,574,353	1,437,070	2,408 097
{ All other .	*a*	2,231,993	2,188,816	3,463,746	3,131,278	3,129,832	1,966,061				
Interest on loans, advances and debentures	*a*	2,652,749	2,508,955	2,633,762	2,553,988	2,588,759	2,578,220	2,552,607	2,508,691	2,482,156	2,498,294
Refund of money borrowed for current expenses	*a*	5,429,438	6,057,300	4,689,474	4,301,229	4,411,493	5,201,538	5,992,779	4,952,893	7,320,328	7,806,602
Non-resident taxes paid	*d*	42,272	70,386	66,343	83,313	75,288	112,915	94,583	95,820	112,247	98,056
Board of Health	*a*	128,250	118,111	100,750	102,430	92,312	97,534	952,200	813,502	1,011,270	2,555,377
Miscellaneous	*a*	821,020	691,539	714,200	893,234	906,026	796,930				
Totals		29,643,088	30,223,996	29,071,839	28,135,044	27,258,802	26,526,591	29,639,734	28,056,602	28,127,159	31,113,453
ASSETS.											
Cash in treasury	*a*	1,413,467	1,645,145	1,849,739	1,641,559	1,728,747	1,648,455	1,314,226	1,856 761	1,698,895	1,613,373
Taxes in arrears	*b*	4,252,611	4,329 972	4,614,387	4,652,431	4,617,196	4,597,668	4,111,047	4,232 438	3,740,979	3,772,078
Rates due from local municipalities	*d*	489,635	533,868	531,222	550,055	587,538	663,043	668,960	654,171	550,787	609 513
Sinking Fund investments and deposits	*a*	10,104,879	9,821,918	9,395,774	8,994,796	8,350,555	7,932,668	10,325,356	9,870,539	8 976,898	8,046,071
Other investments and special deposits	*a*	3,741,275	3 593,175	3,557,079	3,542,472	3 604,475	3,277,020				
Waterworks and electric light plant	*c*	16,203,624	15,312,773	16,085,883	14,137,268	13,720,675	13,464,113	32,694,526	31,042,202	29,316,472	27,728,476
†Other buildings and property	*a*	21,986,563	21,600,123	19,974,122	20,912,711	20,736,433	20,635,993				
Miscellaneous	*a*	7,004,484	6,584,596	5,918,589	5,745,594	5,901,072	4,882,280	5,296,549	6,365,119	6,767,117	6,120,479
Totals		65,196,538	63,421,570	61,926,795	60,176,880	59,246,691	57,101,240	54,710,664	53,461,230	51,051,148	47,889,990
LIABILITIES.											
County levy	*g*	437,388	466,965	478,835	491,415	529,512	631,502	617,942	606,103	522,111	568,817
School rates and grants unpaid	*a*	565,055	536,240	589,389	562,262	621,842	602,998	570,344	561,264	547,917	554,130
Debentures outstanding (principal) for—											
Aid to railways	*a*	3,689,546	3,837,041	3,944,744	4,523,719	4,616,120	4,539,187	4,805,897	5,079,604	5,334,129	5,510,114
Schools	*a*	4,169,382	4,180,673	4,194,554	4,072,628	4,201,547	4,164,156	3,990,317	3,885,401	3,830,985	3,409,726
All other purposes	*a*	49 313,874	48,371,889	46,367,074	44,981,128	44,130,608	43,192,648	40,928,373	39,118,238	38,001,848	34,969,013
Loans for current expenses and interest due on same	*a*	4,602 864	3,191,709	3,720,632	3,219,858	2,682,520	2,546,343	3,151,628	3,639,384	2,857,182	4,100,387
Local municipalities for non-resident taxes	*d*	11,295	11,027	25,889	19,112	21,540	30,070	18,518	19.717	20,510	28.840
Miscellaneous	*a*	2,151,431	2,096,325	2,068,990	2,190,311	2,405,980	2,023,216	2,311,135	1,969,954	2,522,179	2,377,556
Totals		64,940,835	62,691,869	61,390,107	60,060,428	59,209,669	57,730,120	56,394,154	54,879,665	53,636,861	51,518,583

† Exclusive of school property. (*a*) All municipalities ; (*b*) townships, cities, towns and villages ; (*c*) cities, towns and villages ; (*d*) counties ; (*e*) townships ; (*f*) counties, cities, towns and villages ; (*g*) townships, towns and villages.

STATISTICS OF

ONTARIO MUNICIPALITIES.

1899-1900

AND

1900-1901.

POPULATION, AREA, ASSESSMENT AND TAXATION—1900.
RECEIPTS, DISBURSEMENTS, ASSETS AND LIABILITIES—1899.

No.	Township Municipalities and Counties in which located.	Population 1900.	No. of acres assessed 1900.	Assessed value of real and personal property and income taxable, 1900.	Taxes imposed for all purposes, 1900.			Receipts, 1899.								
					Total.	Per head.	Mills on $.	Balance from 1898.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.*	Total receipts.
				$	$	$ c.		$	$	$	$	$	$	$	$	$
1	Adelaide, Middlesex	2,047	44,218	869,749	11,715	5 72	13.5	5,703	11,544	37	.....	12	1,490	.....	6	18,792
2	Adjala, Simcoe	2,108	45,915	853,240	8,281	3 93	9.7	1,000	8,758	113	.....	.....	300	.....	191	10,362
3	Admaston, Renfrew	2,215	70,263	742,835	5,364	2 42	7.2	466	5,175	37	.....	.....	800	.....	171	6,649
4	Adolphustown, Lennox and Addington	487	11,495	342,304	2,738	5 62	8.0	260	2,972	.....	300	144	.....	.....	.....	3,676
5	Albemarle, Bruce	1,335	55,128	175,719	4,109	3 08	23.4	347	5,377	88	950	.....	1,600	.....	189	8,551
6	Alberton, Rainy River	153	16,614	43,160	857	5 60	19.9	30	726	.....	.....	.....	.....	.....	.....	756
7	Albion, Peel	2,751	55,855	1,102,500	11,837	4 30	10.7	257	11,038	122	.....	.....	1,923	2,900	4	16,244
8	Aldborough, Elgin	4,488	74,886	1,666,310	25,910	5 77	15 5	748	25,078	401	888	205	18,424	400	1,042	47,186
9	Alfred, Prescott	3,034	43,976	327,275	7,477	2 46	22.8	19	7,694	151	.....	.....	1,950	.....	11	9,825
10	Algona S. Renfrew	930	31,012	38,945	1,271	1 37	32.6	55	1,086	.....	.....	.....	20	.....	.....	1,161
11	Alice and Fraser, Renfrew	1,940	60,961	118,825	3,573	1 84	30.1	41	3,387	.....	.....	.....	.....	.....	.....	3,428
12	Alnwick, Northumberland	1,031	16,603	327,850	3,202	3 11	9.8	88	3,219	216	.....	.....	300	.....	39	3,862
13	Amabel, Bruce	3,230	64,228	634,180	10,799	3 34	17.0	3,384	13,816	124	392	111	.....	.....	424	18,251
14	Amaranth, Dufferin	2,575	63,433	1,071,760	15,473	6 01	14.4	78	15,005	20	.....	.....	1,500	.....	77	16,680
15	Amelíasburg, Prince Edward	2,995	43,282	1,129,710	11,470	3 83	10.2	127	10,713	63	.....	713	2,016	.....	12	13,644
16	Amherst Island, Lennox and Addington	834	14,521	349,030	3,403	4 08	9.7	.....	3,577	38	.....	.....	755	.....	3	4,373
17	Ancaster, Wentworth	3,788	45,606	2,231,662	15,650	4 13	7.0	924	16,961	3,575	.....	2,099	.....	.....	24	23,583
18	Anderdon, Essex	1,906	22,925	630,045	8,707	4 57	13.8	835	10,164	61	.....	.....	6,632	518	33	18,243
19	Anson and Hindon, Haliburton	279	12,892	35,149	935	3 35	26.6	126	869	.....	.....	.....	.....	.....	221	1,216
20	Armour, Parry Sound	811	36,326	179,143	2,397	2 96	13.4	366	2,385	.....	.....	.....	.....	.....	3	2,754
21	Arran, Bruce	2,517	54,102	1,450,520	8,623	3 43	5 9	2,633	12,140	13	1,674	129	.....	.....	.....	16,589
22	Artemesia, Grey	3,495	69,015	1,023,300	13,110	3 75	12.8	230	14,355	155	105	.....	2,929	.....	307	18,081
23	Arthur, Wellington	2,802	64,438	1,419,250	12,179	4 35	8.6	194	13,149	30	.....	.....	2,300	1,050	491	17,214
24	Ashfield, Huron	3,176	63,871	1,684,445	13,522	4 26	8.0	182	14,556	167	.....	.....	1,500	.....	124	16,529
25	Asphodel, Peterborough	1,762	37,780	843,970	7,789	4 42	9.2	64	7,627	24	.....	76	1,000	.....	11	8,802
26	Assiginack, Manitoulin	1,103	37,305	145,304	2,455	2 23	16.9	457	3,645	75	.....	.....	.....	.....	.....	4,177
27	Athol, Prince Edward	1,093	23,042	477,215	3,677	3 36	7.7	260	3,378	.....	117	123	.....	.....	.....	3,878
28	Augusta, Grenville	3 649	74,572	1,299 860	12 570	3 44	9 7	3,595	10,776	747	471	632	.....	.....	116	16,337

* Miscellaneous receipts include premiums on debentures sold, receipts from other municipalities as share of debt, county road grants, etc.

STATISTICS OF ONTARIO TOWNSHIP MUNICIPALITIES.—*Continued.*

POPULATION, AREA, ASSESSMENT AND TAXATION—1900.

RECEIPTS, DISBURSEMENTS, ASSETS AND LIABILITIES—1899.

No.	Disbursements, 1899.														Assets on December 31, 1899.					Liabilities on December 31, 1899.				
	Allowances, salaries and commissions.	Other expenses of municipal gov'm't.	Roads and bridges.	Construction of buildings, waterworks, &c	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous.*	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
1	668	648	2,746	6	....	3,777	3,818	101	.....	.....	1,490	36	153	13,443	5,349	16	.....	1,510	6,875	3,494	.....	.....	100	3,594
2	586	131	2,121	....	92	2,510	3,733	.....	.....	.....	300	3	94	9,570	792	2,207	.....	.....	2,999	2,306	.....	.....	85	2,391
3	424	234	1,188	....	....	1,249	3,162	.....	.....	111	.....	86	127	6,531	118	3,246	.....	939	4,303	1,705	221	800	225	2,951
4	184	70	211	....	89	1,289	1,072	.....	.....	.....	300	.....	75	3,290	386	.....	3,000	515	3,901	81	.....	.....	.....	81
5	559	345	732	....	168	400	1,804	.....	.....	900	3,091	79	135	8,213	338	4,673	.....	617	5,628	1,606	....	1,637	864	4,107
6	154	41	30	....	6	.....	400	.....	.....	.....	.....	.....	.....	631	125	215	.....	.....	340	.....	.....	.....	.....	.....
7	670	731	2,192	....	5	2,795	7,893	.....	.....	.....	1,892	47	19	16,244	.....	.....	.....	700	700	.....	2,900	31	.....	2,931
8	1,009	728	5,568	....	76	3,783	7,038	1,506	1,636	2,788	19,742	2,365	801	47,040	146	19,560	6,283	26,352	52,341	6,131	35,488	16,053	864	58,536
9	612	278	1,546	....	30	995	4,754	754	.....	118	254	57	420	9,818	7	4,682	.....	440	5,129	2,866	590	2,390	375	6,221
10	134	31	22	....	.....	160	704	.....	.....	70	.....	21	19	1,161	....	876	.....	630	1,506	725	280	20	40	1,065
11	231	125	214	....	45	650	1,795	.....	205	.....	.....	48	15	3,328	100	748	465	490	1,803	350	930	.....	317	1,597
12	414	99	807	....	....	589	1,418	.....	.....	.....	300	8	141	3,776	86	218	.....	1,036	1,340	.....	.....	.....	.....	.....
13	733	210	2,084	....	141	1,251	4,012	.....	.....	4,365	..	1,316	526	14,638	3,613	3,935	2,220	4,036	13,804	618	24,911	.....	.....	25,529
14	530	117	2,172	....	.....	3,417	4,238	.....	.....	3,129	2,000	861	165	16,629	51	5,672	.....	2,200	7,923	517	14,295	520	661	15,993
15	790	258	1,977	....	379	2,354	5,194	.....	710	.....	1,041	794	214	13,621	23	1,775	32,973	4,808	39,579	.....	15,000	2,016	100	17,116
16	138	72	176	7	219	1,356	1,475	.....	.....	.....	843	33	.....	4,319	54	1,172	.....	.....	1,226	.....	.....	755	60	815
17	1,054	1,017	6,381	..	649	4,913	7,161	.....	979	.....	.....	.....	314	22,468	1,115	1,814	48,217	5,616	56,762	.....	.....	5,050	.....	5,050
18	760	1,547	2,228	....	254	1,060	1,977	709	.....	410	7,716	437	689	17,787	456	9,178	.....	1,000	10,634	1,108	2,721	7,138	748	11,715
19	145	46	127	....	10	109	586	.....	.....	109	.....	21	8	1,161	55	651	.....	259	965	558	257	.....	.....	815
20	297	146	46	....	21	.....	1,358	.....	.....	.....	.....	.....	160	2,028	726	2,801	.....	20	3,547	1,731	.....	.....	1,460	3,191
21	749	236	1,693	....	63	2,191	3,859	.....	.....	5,000	.....	443	142	14,376	2,213	260	1,141	939	4,853	.....	.....	.....	25	25
22	930	1,856	2,365	....	204	2,052	6,215	.....	601	.....	2,929	453	224	17,829	252	427	3,700	810	5,189	15	7,900	.....	.....	7,915
23	821	146	1,764	....	5	5,523	5,656	55	.....	117	2,300	113	53	16,553	661	.....	.....	1,047	1,708	1	1,458	.....	.....	1,459
24	825	521	3,334	....	....	2,199	6,625	.....	.....	454	1,500	138	108	15,704	825	3,408	.....	1,604	5,837	2,249	1,504	.....	130	3,883
25	449	40	1,411	....	.....	1,768	3,064	.....	208	.....	1,000	219	234	8,393	409	313	2,392	3,895	7,009	814	3,399	.....	1,431	5,644
26	302	79	257	55	44	.....	2,770	39	.....	.....	.....	.....	4	3,550	627	245	.....	576	1,448	.....	.....	.....	50	50
27	159	80	47	..	216	1,005	2,069	.....	.....	.....	.....	.....	72	3,648	230	141	2,250	1,111	3,732	.....	.....	.....	.....	.....
28	914	333	800	670	4	2 771	7,136	68	125	.....	.....	240	224	13,285	3,059	2,684	19,202	3,028	27 966	2,890	3,200	2,000	...	8,090

* Miscellaneous assets include lands, buildings and other property, advances on local improvements, etc.

TOWNSHIP MUNICIPALITIES, 1899-1900.—*Continued.*

No.	Township Municipalities and Counties in which located.	Population, 1900.	No. of acres assessed, 1900.	Assessed value of real and personal property and income taxable, 1900.	Taxes imposed for all purposes, 1900. Total.	Per head.	Mills on $	Receipts, 1899. Balance from 1898.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
					$	$ c.		$	$	$	$	$	$	$	$	$
29	Bagot and Blithefield, Renfrew	1,397	58,664	152,793	3,184	2 28	20.8	800	3,407	97	.....	.....	1,250	.....	3	4,307
30	Balfour, Algoma	598	20,913	77,326	1,072	3 30	25.5	55	3,065	147	.....	.....	115	.....	125	4,642
31	Bangor, Wicklow & McClure, Hastings	1,013	33,716	41,542	2,075	2 05	49 9	....	1,637	20	.....	.....	225	.....	260	2,032
32	Barrie, Frontenac	521	24,442	40,012	1,470	2 82	36.7	25	1,365	35	.....	.....	.....	.....	23	1,673
33	Barton, Wentworth	3,441	13,089	1,350,816	12,224	3 55	9.0	3,899	12,848	223	373	1,053	.....	.....	401	18,857
34	Bastard and Burgess S. Leeds	2,684	56,246	744,255	10,274	3 83	13.8	1,745	11,212	133	.....	1,010	.....	.....	.....	14,100
35	Bathurst, Lanark	2,440	61,712	806,430	7,857	3 22	9.7	539	6,772	3	.....	43	.....	.....	47	7,404
36	Bayham, Elgin	3,496	56,498	1,067,775	18,790	5 37	17.6	110	18,757	143	.....	8	5,462	.....	72	24,552
37	Beckwith, Lanark	1,555	56,904	500,220	5,986	3 62	12.0	1,680	5,992	30	.....	330	.....	.....	48	8,080
38	Bedford, Frontenac	1,446	63,886	179,163	5,230	3 62	29.2	.....	5,493	22	.....	.....	100	.....	.....	5,615
39	Belmont and Methuen, Peterborough	1,988	80,932	197,421	5,372	2 70	27.2	66	6,525	....	.....	.....	.....	.....	218	6,809
40	Bentinck, Grey	3,284	73,613	1,088,020	11,929	3 63	11.0	2,376	13,345	194	9,383	303	1,175	.....	635	27,411
41	Bertie, Welland	3,040	34,156	1,666,345	13,448	4 42	8.1	1,867	12,369	463	.....	.....	.....	.....	741	15,440
42	Beverly, Wentworth	3,941	70,196	1,997,526	14,136	3 59	7.1	901	15,062	120	1,627	858	.....	.....	72	18,640
43	Bexley, Victoria	864	28,236	125,424	3,438	3 98	27.4	54	3,925	68	600	48	.....	.....	349	5,044
44	Biddulph, Middlesex	2,350	39,285	1,218,815	10,404	4 43	8.5	2,296	13,094	171	.....	.....	2,919	.....	46	18,526
45	Billings, Manitoulin	432	22,876	70,570	1,281	2 97	18.2	287	892	12	.....	.....	.....	.....	5	1,196
46	Binbrook, Wentworth	1,380	26,423	972,750	5,961	4 32	6.1	699	6,812	7	160	.....	.....	.....	.....	7,678
47	Blandford, Oxford	1,542	29,675	1,081,285	7,676	4 98	7.1	2,166	8,054	210	.....	47	1,600	.....	100	12,177
48	Blanshard, Perth	2,563	45,911	2,099,350	13,644	5 32	6.5	4,411	13,796	5	.....	.....	2,850	.....	473	21,535
49	Blenheim, Ox ord	4,269	66,907	2,293,350	20,464	4 79	8.9	1,070	20,276	763	.....	1	1,700	.....	304	24,114
50	Blind River, Algoma	(organized in 1901)														
51	Bonfield, Nipissing	1,275	33,512	153,264	3,497	2 74	22.8	150	2,563	135	.....	.....	100	.....	2	2,950
52	Bosanquet, Lambton	2,488	70,982	1,525,604	13,453	5 41	8.8	1,218	13,026	53	.....	18	1,800	2,344	747	19,206
53	Brant Bruce	3,991	69,598	1,987,325	17,281	4 33	8.7	1,279	15,175	175	7,718	269	.....	.....	188	24,804
54	Brantford, Brant	5,342	71,680	3,751,041	24,642	4 61	6.6	2,285	24,234	120	16,000	2,557	.....	.....	520	45,816
55	Brighton, Northumberland	2,569	48,849	1,178,970	8,904	3 47	7.6	1,589	8,783	2	.....	.....	400	.....	12	10,786
56	Brock, Ontario	3,528	66,380	2,017,045	14,917	4 23	7.4	.....	17,335	70	.....	.....	3,000	.....	76	20,481
57	Bromley, Renfrew	2,001	50,439	168,140	4,816	2 41	28.6	688	3,322	224	.....	.....	.....	.....	.....	4,234
58	Brooke, Lambton	3,278	73,999	1,817,860	26,789	8 17	14.7	4,023	24,906	87	.....	134	5,500	7,877	693	43,220
59	Brougham, Renfrew	578	19,072	31,675	806	1 39	25.4	.....	827	40	.....	.....	113	.....	36	1,016
60	Bruce, Bruce	2,960	67,471	1,385,435	13,003	4 39	9.4	1,170	13 508	87	1,266	68	3,000	3,410	77	22,516
61	Brudenell and Lynedoch, Renfrew	1,339	50,773	70,825	2,115	1 58	29 9	71	2,367	39	.....	.....	.....	.....	.....	2,477
62	Brunel, Muskoka	735	40,924	77,370	2,097	2 85	27.1	147	2,183	.....	.....	.....	.....	.....	46	2,376

TOWNSHIP MUNICIPALITIES, 1899-1900.—*Continued.*

No.	Disbursements, 1899.													Assets on December 31, 1899.				Liabilities on December 31, 1899.				
	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Construction of buildings, waterworks &c	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
29	315	98	299	....	41	396	1,784	....	.....	.....	500	24	21	3,478	829	919	.....	800	2,548	460	.....	324	50	834
30	393	44	481	....	16	....	1,227	.....	.....	.....	1,770	129	310	4,370	272	917	.....	410	1,599	702	.....	.....	.....	702
31	271	65	237	....	10	152	1,096	.....	.....	.....	201	.....	....	2,032	.....	1,791	.....	350	2,141	1,473	.....	465	300	2,238
32	212	15	10	.....	.....	458	827	.....	.....	76	.....	10	20	1,628	45	1,078	.....	400	1,523	376	83	225	.....	684
33	1,133	992	3,065	....	105	2,112	5,075	.....	484	1,000	.....	380	403	14,749	4,108	190	15,243	9,388	28,929	236	9,000	500	130	9,866
34	689	193	686	....	.....	1,992	5,785	.....	1,407	.....	.....	1,150	271	12,173	1,927	95	26,854	2,600	31,476	.....	23,000	.....	300	23,300
35	458	176	626	....	12	1,714	4,005	.....	.....	.....	.....	.....	56	7,047	357	553	780	600	2,290	.....	.....	.....	.....	.....
36	943	2,733	3,551	....	195	2,217	6,101	434	.....	1,945	4,000	1,906	527	24,552	.....	7,202	.....	2,791	9,993	4,008	35,018	1,468	916	41,410
37	503	..	1,874	....	14	1,285	3,174	.....	.....	.....	.....	.....	5	6,855	1,225	.....	8,236	.....	9,461	.....	.....	.....	.....	.....
38	243	30	646	....	101	983	2,566	.....	.....	23	448	31	233	5,304	311	942	.....	500	1,753	448	456	.....	98	1,002
39	494	68	1,175	....	107	696	2,991	.....	.....	115	660	123	430	6,799	10	3,296	.....	1,604	4,910	628	1,604	.....	278	2,510
40	671	754	2,776	....	190	2,275	6,056	.....	500	10,092	1,704	1,118	162	26,298	1,113	3,892	.....	.....	5,005	2,463	2,207	.....	631	5,241
41	639	369	2,334	..	48	3,098	5,921	673	.....	833	.....	339	600	14,854	586	2,844	.....	12,239	15,669	.....	5,892	.....	153	6,045
42	936	414	2,903	....	502	5,088	6,596	30	1,753	.....	.....	.....	324	18,546	94	2,425	13,744	3,200	19,463	.....	.....	.....	.....	.....
43	292	44	302	....	20	289	1,745	.....	676	600	304	422	226	4,920	124	2,695	1,772	725	5,316	1,321	7,500	.....	100	8,921
44	684	220	4,351	....	25	1,866	4,151	.....	.....	315	2,919	247	35	14,813	3,713	671	.....	2,334	6,718	1,619	1,495	2,000	80	5,194
45	167	44	181	....	11	.....	491	.....	.....	.....	.....	.....	35	929	267	771	.. ..	.....	1,038	339	.....	.....	.....	339
46	375	201	899	....	163	1,923	2,648	.....	.....	95	.....	60	219	6,583	1,095	432	.....	400	1,927	.....	1,105	.....	.....	1,105
47	472	103	2,745	....	5	1,942	2,863	.....	.....	744	1,600	133	298	10,905	1,272	.....	.....	285	1,557	.....	2,329	.....	.....	2,329
48	710	122	4,579	....	24	4,061	4,209	.....	.....	294	2,850	75	195	17,119	4,416	394	....	1,494	6,304	4,061	308	.....	155	4,524
49	1,282	300	4,747	....	256	5,028	8,538	79	.....	893	1,700	562	154	23,539	575	79	.....	9,218	9,872	.....	9,502	.....	.....	9,502
50																								
51	358	112	204	....	.....	.....	1,911	8	.....	.....	300	.....	37	2,930	20	4,059	.....	127	4,206	2,189	.. ..	513	166	2,868
52	906	274	3,654	....	254	2,263	4,981	2,980	.....	1,104	1,800	200	216	18,632	574	100	.....	5,481	6,155	.....	4,460	.....	507	4,967
53	783	654	2,514	....	71	3,045	6,434	.....	3,760	5,000	.....	218	430	22,909	1,895	665	6,357	950	9,867	.....	.....	.....	4,376	4,376
54	2,079	1,053	5,189	....	1,068	4,766	13,204	6	16,000	210	.....	411	568	44,544	1,272	4,388	68,742	4,374	78,726	2,119	7,076	.....	2,982	12,177
55	550	219	1,428	125	92	1,759	4,408	.....	.....	.....	400	7	319	9,307	1,479	18	.....	850	2,347	.....	.....	.....	.....	.....
56	1,105	410	2,881	....	744	2,736	7,257	.....	.....	101	4,377	196	509	20,316	165	278	.....	2,785	3,228	57	1,413	.....	258	1,728
57	350	89	463	....	.....	425	2,125	.....	.....	110	.....	6	92	3,660	574	.....	.....	1,325	1,899	769	.....	.....	.....	769
58	716	1,090	4,602	300	431	2,433	8,901	8,101	....	7,802	5,624	1,670	170	41,840	1,380	10,403	.....	660	12,443	.....	34,843	2,500	400	37,743
59	199	38	140	....	.....	121	342	.....	.....	100	2	18	.....	960	56	.....	.....	200	256	.....	200	120	.....	320
60	581	1,646	4,049	....	101	2,495	7,721	.....	1,509	.....	3,000	278	79	21,459	1,057	99	1,509	1,000	3,665	....	5,910	.....	171	6,081
61	331	54	103	....	30	291	1,409	.....	.....	.....	.....	.....	.....	2,218	259	2,297	.....	650	3,206	1,765	.....	.....	.....	1,765
62	258	41	202	....	10	....	1,101	.....	.....	100	.....	24	175	1,911	465	765	.....	900	2,130	790	300	.....	.....	1,090

TOWNSHIP MUNICIPALITIES. 1899-1900.—*Continued.*

No.	Township Municipalities and Counties in which located.	Population in 1900.	No. of acres assessed, 1900.	Assessed value of real and personal property and income taxable, 1900.	Taxes imposed for all purposes, 1900.			Receipts. 1899.								
					Total.	Per head.	Mills on $	Balance from 1898.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	$		$	$	$	$	$	$	$	$	$
63	Burford, Brant	4,266	66,566	2,195,820	19,831	4 65	9.0	3,064	20,496	19	2,000	206			183	25,968
64	Burgess N., Lanark	867	32,788	187,485	2,307	2 66	12.3	204	2,354	4						2,562
65	Burleigh and Anstruther, Peterborough	616	30,761	88,364	2,428	3 94	27.5	89	1,879	9			200		120	2,297
66	Burpee, Manitoulin	258	12,640	24,988	721	2 79	28.9	4	869			5	150			1,028
67	Caistor, Lincoln	1,730	32,774	663,660	5,720	3 31	8.6	1,191	5,950	6					108	7,255
68	Caldwell, Nipissing	731	30,947	101,560	1,528	2 09	15.0	330	1,130	196					40	1,696
69	Caledon, Peel	3,739	68,607	1,772,835	14,526	3 88	8.2	673	15,115	209		9	3,000			19,006
70	Caledonia, Prescott	1,759	45,269	283,579	7,174	4 08	25.3	117	5,501	99			1,317		303	7,337
71	Calvin, Nipissing	535	29,324	59,858	1,183	2 21	19.8	307	1,421						6	1,734
72	Cambridge, Russell	2,992	59,615	424,473	10,163	3 40	23.9	5	9,604	200			2,445	700	123	13,077
73	Camden, Kent	2,523	40,705	1,015,140	15,060	5 97	14.8		14,788	7			237	5,450	1,210	21,692
74	Camden East, Lennox and Addington	5,262	86,356	1,457,740	21,346	4 06	14.6	2,528	19,683	222	3,036	1,272			6	26,747
75	Cameron, Nipissing	159	11,774	37,215	397	2 50	10.7	14	575							589
76	Canborough, Haldiamnd	914	21,454	373,607	3,829	4 19	10.8	121	3,775	1			400		9	4,306
77	Caradoc, Middlesex	3,924	61,975	1,200,326	18,656	4 75	15.5	10,630	17,193	54				1,133	5	29,015
78	Carden, Victoria	705	44,564	62,488	1,998	2 83	32.0	78	2,021						40	2,139
79	Cardiff, Haliburton	590	25,287	33,893	2,475	4 19	73.0	12	2,007							2,019
80	Cardwell, Muskoka	446	27,535	70,756	1,228	2 75	17.4	577	1,456		250				39	2,322
81	Carling, Parry Sound	259	30,477	39,867	749	2 89	18.8	67	537							604
82	Carlow, Hastings	611	22,062	49,790	1,757	2 88	35.3	151	1,887						210	2,248
83	Carnarvon, Manitoulin	622	30,141	96,385	1,775	2 85	18.4	384	1,512	10				400		2,306
84	Carrick, Bruce	4,447	59,498	2,088,529	14,213	3 20	6.8	1,401	13,379	336		82			28	15,226
85	Cartwright, Durham	1,748	37,412	725,520	5,125	2 93	7.1	467	5,887	102			975		37	7,468
86	Cavan, Durham	2,643	62,506	1,556,675	10,637	4 02	6.8	1,969	10,944	139					56	13,108
87	Cayuga N., Haldimand	1,515	32,742	732,409	5,762	3 80	7.9	359	5,604	64		11			35	6,073
88	Cayuga S., Haldimand	770	13,261	394,900	2,602	3 38	6.6	795	2,714	1					2	3,512
89	Chaffey, Muskoka	1,107	41,606	131,510	2,720	2 46	20.7	210	2,905	15			200		17	3,347
90	Chandos, Peterborough	741	42,165	55,434	2,171	2 93	39.2	60	2,565							2,625
91	Chapleau, Algoma															
92	Chapman Parry Sound	684	36,812	132,339	1,221	1 79	9.2	554	1,196	51					84	1,885
93	Chapple, Rainy River	307	22,365	175,577	1,452	4 73	8.3								38	38
94	Charlottenburg, Glengarry	4,817	78,600	1,178,960	16,953	3 52	14.4		18,028	319			1,926	7,000	294	27,567
95	Charlotteville, Norfolk	3,289	62,608	934,567	13,272	4 04	14.2	566	12,858	14		327	3,100	1,447	37	18,349
96	Chatham, Kent	5,099	84,480	1,991,639	41,863	8 21	21.0	32	38,798	63			24,948	26,602	2,798	93,241

No.	Disbursements, 1899.														Assets on December 31, 1899.					Liabilities on December 31, 1899.				
	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Construction of buildings, waterworks &c	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
63	875	286	6,436	....	662	3,836	7,984	270	141	737	.....	95	533	21,855	4,113	.....	2,141	500	6,754	.....	1,140	.....	1,520	2,660
64	284	84	172	....	....	480	1,306	....	....	.....	.....	.....	50	2,376	186	113	.....	600	899	.....	.....	.....	52	52
65	277	154	29	....	17	183	980	....	...	206	200	164	41	2,251	46	959	.....	1,086	2,091	773	1,924	800	....	3,497
66	148	53	8	....	....	....	533	....	41	.....	50	120	4	957	71	651	126	....	848	270	2,000	103	....	2,373
67	322	125	423	....	....	1,666	2,770	....	.....	.....	.....	.....	192	5,498	1,757	1,131	..	1,021	3,909	1,568	.....	.....	.....	1,568
68	169	120	123	....	....	....	861	....	.....	67	.....	37	4	1,381	315	1,650	.....	769	2,734	949	669	.....	288	1,906
69	898	312	2,989	....	46	3,397	7,795	....	.....	.....	3,000	49	150	18,636	370	934	.....	2,000	3,304	.....	.....	.....	.....	.....
70	580	1,311	715	....	....	1,065	2,998	341	.....	214	.....	101	22	7,337	....	4,165	.....	1,075	5,240	2,952	860	2,307	1,330	7,449
71	139	66	80	....	....	....	932	....	.....	100	250	43	35	1,645	89	1,169	.....	500	1,758	435	500	.....	....	935
72	573	323	3,103	147	51	1,768	4,313	328	.....	482	1,500	463	75	13,066	11	5,897	.....	1,275	7,183	3,141	5,007	3,165	612	11,925
73	809	278	2,179	....	406	1,601	7,601	3,592	.....	3,239	718	838	431	21,692	.....	8,833	.....	1,467	10,300	1,212	25,387	237	657	27,493
74	1,044	659	2,669	6	502	6,265	7,815	.....	4,277	180	.....	1,877	328	25,622	1,125	1,283	29,835	1,049	33,292	.....	30,540	.....	1,220	31,760
75	80	26	34	....	....	....	322	....	.....	.....	112	.....	...	574	15	609	.....	.....	624	200	.....	.....	51	251
76	175	42	324	77	69	1,133	1,664	....	.....	.....	200	5	144	3,833	473	17	.....	.....	490	.....	.....	209	.....	209
77	1,019	504	3,983	....	92	4,166	6,140	1,055	.....	2,262	.....	464	531	20,156	8,859	1,539	.....	5,997	16,395	4,079	8,990	.....	....	13,069
78	207	67	262	....	....	299	1,100	....	.....	50	.....	39	52	2,076	63	665	.....	650	1,378	262	650	.....	26	938
79	216	55	187	....	....	....	1,073	....	.....	33	200	36	215	2,015	4	1,942	.....	337	2,283	1,730	337	448	82	2,597
80	244	54	107	....	....	....	638	....	.....	280	.....	24	5	1,352	970	800	.....	....	1,770	723	67	.....	164	954
81	94	48	25	....	....	....	210	....	.....	.....	100	.....	....	477	127	521	.....	10	658	73	.....	.....	40	113
82	222	35	241	....	....	129	946	....	.....	131	.....	43	39	1,786	462	988	.....	479	1,929	982	604	.....	66	1,652
83	174	50	113	....	....	....	1,604	....	.....	130	.....	44	77	2,192	114	2,377	.....	1,000	3,491	902	1,000	.....	4	1,906
84	599	374	846	....	57	2,750	7,620	....	331	.....	.....	360	192	13,129	2,097	17	3,211	5,169	10,494	.....	7,200	.....	....	7,200
85	409	116	1,123	....	157	1,219	2,928	....	.....	150	975	83	151	7,311	157	43	....	3,211	3,411	.....	871	.....	....	871
86	882	160	2,286	....	109	2,469	5,468	....	.....	.....	.....	.....	413	11,787	1,321	415	.....	6,293	8,029	.....	.....	.....	1,261	1,261
87	326	113	280	....	16	1,862	2,928	....	.....	.....	.....	.....	27	5,552	521	.....	.....	.....	521	.....	.....	.....	.....	.....
88	140	5	106	....	31	1,799	1,081	....	.....	.....	.....	1	20	3,183	329	410	.....	1,220	1,959	.....	.....	.....	.....	.....
89	268	193	378	....	....	....	1,252	....	.....	236	535	105	24	2,991	356	3,172	.....	....	3,528	321	1,445	211	....	1,977
90	382	68	123	....	95	225	1,147	....	.....	.....	.....	.....	140	2,180	445	1,275	.....	.....	1,720	1,000	.....	.....	636	1,636
91	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
92	283	120	202	....	70	....	654	....	.....	.....	.....	.....	46	1,375	510	1,015	.....	337	1,862	475	.....	.....	46	521
93	22	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
94	954	240	3,194	2,082	17	2,000	14,968	.....	.....	925	2,001	707	479	27,567	....	6,884	.....	4,666	11,550	4,640	16,604	71	298	21,013
95	683	113	1,690	....	256	3,560	5,357	1,761	.....	1,035	2,100	604	205	17,364	985	3,471	8,764	600	13,820	1,738	11,816	1,600	....	15,154
96	2,993	2,013	4,017	....	944	4,561	9,608	18,033	.....	11,314	33,291	4,110	2,267	93,151	90	30,996	.....	58,170	89,256	6,745	75,353	24,948	5,951	112,997

No.	Township Municipalities and Counties in which located.	Population, 1900.	No. of acres assessed, 1900.	Assessed value of real and personal property and income taxable, 1900.	Taxes imposed for all purposes, 1900.			Receipts, 1899.								
					Total.	Per head.	Mills on $	Balance from 1898.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	$		$	$	$	$	$	$	$	$	$
97	Chinguacousy, Peel	3,888	80,132	2,921,300	18,010	4 63	6.2	292	19,035	180	3,114	1,461	2,880	.....	161	27,123
98	Christie, Parry Sound	305	19,888	78,092	1,492	4 89	19.1	310	1,188	69	.....	.....	.....	700	41	2,308
99	Clarence, Russell	4,820	69,370	363,504	12,184	2 53	33.6	227	12,229	344	.....	.....	1,500	.....	15	14,315
100	Clarendon and Miller, Frontenac	874	46,064	79,607	2,241	2 56	28.2	246	1,767	.....	.....	.....	.....	.....	.....	2,013
101	Clarke, Durham	3,705	68,232	1,798,405	15,401	4 16	8.6	121	18,289	239	.....	.....	2,025	.....	154	20,828
102	Clinton, Lincoln	1,831	24,716	1,043,823	9,784	5 34	9.4	340	10,214	.....	.....	9	1,200	.....	32	11,795
103	Cockburn Island, Manitoulin	170	10,691	28,027	804	4 73	28.7	36	662	.....	.....	.....	.....	.....	.....	698
104	Colborne, Huron	1,802	34,083	1,077,200	7,251	4 02	6.7	57	7,638	134	.....	.....	1,200	.....	17	9,046
105	Colchester N., Essex	1,848	30,612	597,363	14,274	7 72	23.9	1,321	13,650	.....	.....	53	13,675	8,346	1,219	38,264
106	Colchester S, Essex	2,761	34,480	1,007,318	17,837	6 46	17 7	348	23,513	23	.....	43	.....	5,171	189	29,287
107	Collingwood, Grey	3,636	68,000	1,378,016	16,024	4 41	11.6	435	17,129	21	5,318	161	7,750	.....	123	30,937
108	Cornwall, Stormont	5,674	64,039	1,057,398	15,117	2 66	14.3	213	20,821	383	.....	.....	.....	.....	122	21,539
109	Cramahe, Northumberland	2,437	46,568	1,092,360	9,111	3 74	8 3	311	6,947	92	.....	.....	2,120	.....	20	9,490
110	Crosby N., Leeds	1,805	43,284	375,264	6,882	3 81	18.3	217	5,383	140	.....	80	1,071	5,000	5	11,896
111	Crosby S, Leeds	1,591	36,733	387,876	6,250	3 93	16.1	1,222	5,914	73	.....	155	575	.....	.....	7,939
112	Crowland, Welland	967	19,217	388,067	4,953	5 12	12.8	410	6,472	69	.....	.....	300	.....	50	7,301
113	Culross, Bruce	3,007	56,756	1,721,650	9,659	3 21	5.6	895	9,312	87	.....	7	600	.....	15	10,916
114	Cumberland, Russell	3,597	74,696	429,994	12,966	3 60	30.2	459	11,157	239	.....	.....	.....	.....	26	11,881
115	Dalhousie and Sherbrooke N., Lanark	1,729	72,558	262,293	4,484	2 59	17.8	330	4,221	20	.....	.....	.....	.....	39	4,610
116	Dalton, Victoria	488	29,032	37,048	1,134	2 32	30.6	435	1,281	.....	.....	.....	.....	.....	76	1,792
117	Darling, Lanark	720	45,310	69,098	1,679	2 33	24.3	.....	1,640	.....	.....	14	.....	.....	2	1,656
118	Darlington, Durham	4,102	68,586	2,411,425	18,822	4 59	7.8	1,023	18,757	86	.....	34	.....	.....	50	19,950
119	Dawn, Lambton	3,389	65,624	889,105	21,663	6 39	24.4	1,817	19,552	51	.....	.....	.....	3,668	139	25,227
120	Delaware, Middlesex	1,528	23,455	588,625	7,120	4 66	12.1	1,872	7,649	18	807	110	.....	.....	299	10,755
121	Denbigh, Ab. & Ash., Lennox & Addington	1,043	44,278	53,999	1,878	1 80	34.8	.....	1,807	.....	.....	.....	.....	.....	10	1,817
122	Derby, Grey	1,886	40,236	776,250	7,652	4 06	9.9	528	7,285	87	.....	.....	1,500	.....	78	9,478
123	Dereham Oxford	3,711	65,068	2,411,230	25,105	6 77	10.4	73	22,855	743	.....	31	.....	10,342	4,970	39,014
124	Dorchester N., Middlesex	3,515	51,616	1,701,305	16,778	4 77	9.9	6,222	16,591	90	.....	258	.....	.....	205	23,366
125	Dorchester S., Elgin	1,474	30,558	1,065,790	10,646	7 22	10.0	.....	11,721	.....	.....	.....	1,215	.....	27	12,963
126	Douro, Peterborough	2,007	38,653	770,660	7,133	3 55	9.3	2,220	6,485	1	.....	.....	1,000	600	15	10,321
127	Dover, Kent	4,234	68,058	1,740,724	29,083	6 87	16.7	4,024	19,843	233	.....	126	5,484	11,856	1,082	42,648
128	Downie, Perth	2,716	48,571	2,057,150	13,341	4 91	6.5	1,930	13,577	126	.....	.....	3,202	.....	431	19,266
129	Draper, Muskoka	941	38,010	91,709	2,346	2 49	25.6	462	2,434	131	.....	.....	.....	.....	828	3,855
130	Drummond Lanark	1,904	57,787	709,124	7,326	3 85	10.3	234	7,628	64	.....	.....	394	900	20	9,240

No.	Disbursements, 1899.													Assets on December 31, 1899.				Liabilities on December 31, 1899.				
	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Construction of buildings, waterworks &c	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
97	1,160	1,615	5,749	....	73	6,866	7,747	.....	3,361	240	.....	109	203	27,123	....	729	32,760	2,954	36,443	45	1,870	2,880	30	4,825
98	236	74	199	23	....	....	1,419	.....	.....	.....	.....	.....	47	1,998	310	1,492	.....	1,363	3,165	....	700	....	....	700
99	761	183	2,326	....	24	1,596	5,834	558	.....	351	610	136	710	13,119	1,196	7,741	....	718	9,655	7,002	1,734	1,500	25	10,261
100	193	56	70	....	22	....	1,073	.....	75	....	96	....	92	1,677	336	1,332	75	.....	1,743	966	.....	375	....	1,341
101	967	388	2,879	2,130	295	4,300	6,702	.....	....	303	2,025	157	559	20,705	123	1,574	.....	6,425	8,122	279	1,868	.....	....	2,147
102	570	123	1,963	....	10	3,203	3,986	....	....	151	1,200	42	296	11,544	251	1,006	.....	350	1,607	....	155	.....	169	324
103	166	8	5	....	....	....	300	.....	.....	.....	.....	....	2	481	217	.....	.....	40	257	.....	.....	.....	46	46
104	458	169	1,783	....	5	1,613	3,703	.....	.....	.....	1,200	30	79	9,040	6	443	.....	59	508	500	.....	.....	47	547
105	785	698	2,288	....	101	919	2,921	9,247	.....	4,918	14,000	1,590	767	38,264	.....	16,044	.... ..	1,926	17,970	3,295	31,716	2,687	1,518	39,216
106	780	1,102	1,498	823	180	1,886	8,793	948	.....	6,449	3,000	1,648	488	27,495	1,792	14,842	....	5,507	22,141	6,426	26,405	.....	2,604	35,435
107	934	833	3,284	....	351	3,127	6,540	....	5,879	341	7,450	692	1,376	30,807	130	488	5,879	1,827	8,324	.... ..	9,225	1,300	130	10,655
108	749	590	2,220	....	516	2,181	10,218	56	.....	208	3,000	246	395	20,379	1,160	2,927	.....	3,000	7,087	1,493	1,769	.....	1,467	4,729
109	662	270	1,644	....	119	1,479	4,995	....	.....	.....	.....	.....	321	9,490	.....	3,215	.....	4,715	7,930	.....	.....	2,120	307	2,427
110	451	578	843	....	25	.....	8,119	....	451	.....	550	588	234	11,839	57	1,649	7,520	510	9,736	1,132	16,000	3,370	59	20,561
111	406	86	516	....	....	878	3,447	.....	181	....	863	246	19	6,642	1,297	..	6,604	1,400	9,301	.....	4,783	612	....	5,395
112	267	164	569	....	2	1,980	2,345	.....	.....	215	400	40	69	6,051	1,250	314	.....	772	2,336	1,286	217	....	....	1,503
113	526	312	2,669	....	4	2,211	4,369	.....	.....	.....	600	14	78	10,783	133	.....	.... ..	117	250	.....	.....	.....	250	250
114	850	283	2,333	....	20	1,695	5,312	508	.....	259	.....	139	352	11,751	130	9,359	.....	400	9,889	5,247	1,991	.....	2,511	9,749
115	369	111	594	....	7	529	2,714	.....	.....	.....	.....	.....	50	4,374	236	556	.... ..	500	1,292	..	.....	.....	....	....
116	167	38	258	....	5	125	674	.....	.....	.....	.....	.....	57	1,324	468	425	.....	.....	893	253	.....	.....	72	325
117	159	82	68	....	43	159	550	.....	.....	.....	485	30	80	1,656	....	607	200	60	867	550	.....	315	45	910
118	861	360	3,659	200	353	....	8,824	.....	.....	.....	.....	.....	417	14,674	5,276	1,089	.....	625	6,990	3,608	.....	.....	125	3,733
119	780	316	3,018	18	178	1,510	5,524	5,893	.....	4,250	.....	985	2,376	24,848	379	16,968	.....	15,521	32,868	8,385	16,383	.....	2,797	27,565
120	645	738	2,457	....	80	2,011	2,246	121	532	581	.....	162	473	10,046	709	3,714	532	1,940	6,895	1,849	2,459	.....	....	4,308
121	177	50	58	....	19	....	1,359	.....	.....	.....	15	....	28	1,706	111	173	.....	.....	284	180	.....	.....	....	180
122	718	191	1,951	229	5	1,332	2,988	.....	.....	160	1,500	47	119	9,240	238	43	.....	825	1,106	.....	300	.....	86	386
123	1,357	967	5,971	130	27	4,886	7,396	13,209	.....	2,737	.....	841	528	38,049	965	3	5,000	1,527	7,495	.....	25,141	.....	....	25,141
124	856	249	4,943	....	187	4,200	6,183	430	.....	659	....	89	245	18,641	5,325	3,060	6,400	307	15,092	3,886	1,149	.....	....	5,035
125	745	175	2,307	....	33	3,293	3,057	2,427	.....	....	721	81	124	12,963	....	709	....	1,082	1,791	.....	....	1,615	....	1,615
126	515	141	1,317	....	69	3,940	3,012	.....	.....	137	1,000	31	76	10,238	83	476	....	1,074	1,633	7	600	.....	136	743
127	1,203	773	905	....	354	3,164	5,048	18,280	.....	9,241	.....	2,569	710	42,344	304	18,310	.....	4,111	22,725	3,915	52,920	5,484	....	62,319
128	828	59	4,553	....	127	4,876	4,610	76	.....	.....	3,202	.....	488	18,819	447	174	.....	900	1,521	.....	.....	.....	158	158
129	298	34	1,295	....	5	....	1,272	.....	.....	100	.....	12	46	3,062	793	1,966	.....	27	2,786	1,077	100	.....	....	1,177
130	538	183	753	....	223	1,771	4,124	.....	.....	370	393	46	34	8,435	805	154	.....	720	1,679	.....	720	.....	....	720

No.	Township Municipalities and Counties in which located.	Population, 1900.	No. of acres assessed, 1900.	Assessed value of real and personal property and income taxable, 1900.	Taxes imposed for all purposes, 1900.			Receipts, 1899.								
					Total.	Per head.	Mills on $	Balance from 1898.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	$ c.	$	$	$	$	$	$	$	$	$	$
131	Drury, Denison and Graham, Algoma	231	39,052	96,289	2,223	9 62	23.1	6	1,703	140	.....	8	700	.....	301	2,858
132	Dumfries N., Waterloo	2,059	44,315	1,871,170	9,675	4 70	5.2	1,052	8,226	104	.....	.....	1,467	.....	20	10,869
133	Dumfries S., Brant	2,570	46,670	2,314,892	13,536	5 27	5.8	1,357	13,088	90	.....	14	1,500	.....	55	16,104
134	Dummer, Peterborough	2,056	68,773	617,075	6,389	3 11	10.4	791	5,844	8	.....	.....	.....	.....	37	6,680
135	Dungannon, Hastings	682	33 941	49,599	2,373	3 48	47.8	11	1 837	4	.....	.....	.....	.....	464	2,316
136	Dunn, Haldimand	826	14,858	397,770	3,365	4 07	8.5	433	3,288	45	.....	3	.....	.....	.....	3,769
137	Dunwich, Elgin	3,197	69,331	1,736,495	22,169	6 93	12.8	1,058	21,791	60	347	.....	10,500	1,881	52	35,689
138	Dymond, Nipissing	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
139	Dysart, Guilford, etc., Haliburton	990	366,522	133,303	4,854	4 90	36 4	964	4,945	359	.....	.....	500	450	25	7,243
140	Easthope N., Perth	2,194	43,105	1,932,420	11,770	5 36	6.1	3,917	12,729	72	.....	14	.....	2,363	414	19,509
141	Easthope S., Perth	1,917	23,816	1,144,415	8,525	4 45	7.4	1,522	7,483	374	.....	8	.....	400	215	10,002
142	Eastnor, Bruce	1,512	50,041	324,436	4,751	3 14	14.6	39	6,175	333	2,125	252	.....	.....	379	9,303
143	Edwardsburg, Grenville	3,784	69,538	1,169,375	12,497	3 30	10.7	493	12,161	27	.....	699	102	.....	13	13,495
144	Egremont, Grey	3,190	72,685	1,543,130	12,103	3 79	7 8	1,284	12,568	44	.....	21	896	.....	230	15,043
145	Ekfrid, Middlesex	2,646	53,428	2,012,300	16,583	6 27	8.2	201	19,192	48	.....	.....	600	3,518	750	24,309
146	Elderslie, Bruce	2,248	54,418	1,292,080	10,034	4 46	7.8	8	9,308	8	9,661	187	1,890	.....	1,176	22,238
147	Eldon, Victoria	2,913	61,984	765,030	11,033	3 79	14.4	1,904	8 816	163	3,241	168	1,500	.....	85	15,877
148	Elizabethtown, Leeds	3,849	78,000	1,396,333	15,275	3 97	10.9	817	15,276	1,253	.....	197	.....	.....	.....	17,543
149	Edice, Perth	3,027	54,511	1,626,724	20,602	6 81	12 7	11,218	20,419	197	.....	77	.....	9,109	3,290	44,310
150	Elma, Perth	3,357	67,291	1,611,665	21,665	6 45	13.4	6,869	20,296	112	.....	524	.....	17,633	4,755	50,189
151	Elmsley N., Lanark	1,065	28,228	375,630	3 277	3 08	8.7	510	3,377	.....	.....	.....	.....	.....	38	3,925
152	Elmsley S., Leeds	745	22,258	456,050	2,880	3 87	6.3	855	3,129	181	72	.....	.....	.....	8	4,245
153	Elzevir and Grimsthorpe, Hastings	1,296	64,555	97,552	3,468	2 68	35.6	.....	3,797	31	.....	.....	720	300	657	5,505
154	Emily, Victoria	2,051	59,984	951,743	10,150	4 95	10.7	484	9,905	.....	.....	.....	1,800	800	6	12,995
155	Emo, Rainy River	416	41,809	123,335	2,182	5 25	17.7	.....	.....	.....	.....	.....	50	.....	.....	50
156	Enniskillen, Lambton	4,614	81,841	1,464,085	30,320	6 57	20.7	8,123	31,276	83	.....	.....	.....	6,150	1,226	46,858
157	Ennismore, Peterborough	708	17,379	358,080	2,664	3 76	7.4	28	2,751	8	.....	.....	200	.....	.....	2,987
158	Eramosa, Wellington	2,647	44,064	1,856,705	10,682	4 04	5 8	527	10,535	199	.....	5	.....	.....	261	11,527
159	Erin, Wellington	3,196	70,498	2,020,900	13,330	4 17	6 6	268	12,896	159	.....	.....	.....	.....	.....	13,323
160	Ernestown, Lennox and Addington	3,160	61,236	1,460 980	14,419	4 56	9 9	111	14,686	33	725	1,311	150	.....	191	17,207
161	Esquesing, Halton	3,718	67,217	2,288,280	16,285	4 38	7 1	1,288	13,921	137	1,040	1,933	4,038	.....	20	22,377
162	Essa, Simcoe	4,260	67,532	1,289,494	12,533	2 94	9.7	1,419	15,026	123	.....	.....	.....	1,900	228	18,696
163	Etobicoke, York	3,603	29,092	1,838,085	20,956	5 82	11 4	8,222	18,495	269	842	678	2,000	.....	350	30,856
164	Euphemia, Lambton	2,210	39,172	989,552	9,606	4 35	9.7	144	9,305	99	.....	.....	1,500	.....	.....	11,048

TOWNSHIP MUNICIPALITIES, 1899-1900.—*Continued.*

No.	Disbursements, 1899.														Assets on December 31, 1899.								Liabilities on December 31, 1899.				
	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Construction of municipal-ways, waterworks &c	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
131	457	131	190	....	....	2,541	398	78	53	....	314	86	451	2,158	700	2,430	192	308	3,630	532	500	900	....	1,932
132	698	220	1,078	....	....	3,111	5,631	....	....	....	1,300	17	378	10,869	....	1,136	....	....	1,136	....	7,060	807	125	7,992
133	900	279	2,786	....	383	3,111	5,631	....	....	239	1,500	390	272	15,491	613	10	....	700	1,323	....	....	....	....	7,060
134	457	72	941	....	265	2,832	4,924	17	....	90	....	27	118	6,068	612	403	....	566	1,581	24	450	....	100	674
135	270	70	205	....	114	1,157	....	....	252	51	....	51	21	2,191	125	2,354	252	807	3,538	1,748	807	....	255	2,810
136	214	54	156	....	133	1,073	1,550	....	....	....	....	....	67	3,247	622	4	1,000	1,300	1,526	....	....	....	....	....
137	1,193	781	4,766	....	....	2,660	6,559	2,217	....	2,442	12,800	793	1,096	34,237	1,452	5,280	....	4,558	11,290	5,359	14,188	500	1,857	21,904
138	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
139	412	267	855	....	110	1,176	2,416	....	....	155	....	39	188	5,618	1,625	1,485	....	3,226	6,336	1,707	755	500	110	3,072
140	687	217	2,236	....	190	3,382	3,708	241	....	2,028	....	287	2,216	15,192	4,317	286	2,421	1,103	8,077	....	8,307	....	101	8,408
141	598	133	2,053	....	38	2,028	2,702	....	....	616	....	105	257	8,510	1,492	84	....	340	1,854	....	2,405	....	1,044	3,449
142	406	251	690	251	79	2,440	....	31	1,046	2,100	883	837	125	9,219	....	4,613	4,866	4,410	13,973	1,088	14,935	....	1,446	17,469
143	619	268	1,841	....	73	2,511	8,063	94	....	....	....	100	396	13,495	1,452	5,019	17,877	....	22,926	2,651	....	2,602	237	5,490
144	431	211	1,922	....	197	2,401	4,924	....	....	3,000	896	248	36	14,286	757	....	....	....	760	....	3,000	....	....	3,000
145	760	422	4,249	273	70	4,133	4,234	4,705	....	3,103	1,600	561	158	24,258	51	5,595	....	4,995	10,581	3,843	10,360	....	600	14,803
146	556	197	2,008	....	12	2,242	4,164	....	....	10,000	1,890	885	215	22,169	69	37	....	....	106	....	....	....	....	....
147	693	204	1,647	....	322	1,848	3,443	40	1,181	3,284	1,600	745	120	16,033	841	1,600	2,613	936	5,893	1,618	10,758	....	175	12,551
148	941	349	2,136	1,556	236	3,091	4,178	10,690	601	4,321	....	1,489	1,871	35,214	9,096	4,617	6,832	2,304	11,166	3,001	29,621	9,800	1,086	43,508
149	869	680	3,516	....	185	3,920	5,503	4,411	....	2,399	....	1,212	6,739	29,434	20,766	625	....	958	66,908	....	44,165	6,750	....	50,915
150	390	135	659	....	....	1,423	1,540	13	....	....	....	....	37	3,441	184	122	....	400	1,006	12	....	200	....	212
151	231	291	254	....	....	1,423	1,845	....	....	....	....	11	90	3,844	401	3	....	519	923	....	....	....	34	34
152	443	....	685	....	....	2,401	2,655	....	....	100	681	26	256	6,905	....	2,058	....	1,200	3,258	....	400	726	60	1,810
153	739	....	2,035	....	227	2,550	4,498	....	....	87	1,800	68	127	12,766	266	....	....	713	948	....	713	....	....	713
154	42	94	....	....	....	....	....	....	....	....	....	....	....	48	....	....	....	....	....	....	....	....	....	....
155	1,686	1,000	5,007	....	670	2,556	9,041	7,955	....	7,669	....	2,109	1,292	39,186	7,672	31,115	....	34,023	72,810	4,985	38,922	....	3,872	47,729
156	1,080	463	2,098	....	5	630	1,422	....	....	....	....	7	47	2,916	....	....	....	....	....	....	....	....	....	....
157	2,060	258	1,447	....	64	3,125	4,739	12	....	....	200	....	78	10,302	1,225	6,023	....	16	7,264	6,367	....	....	104	6,471
158	1,647	157	1,463	....	15	4,598	6,520	....	....	....	....	....	67	13,270	47	8,871	....	....	8,918	4,455	....	....	....	4,455
159	2,263	127	1,238	....	....	3,598	6,549	....	725	416	150	165	257	16,851	356	5,840	23,100	1,182	30,478	4,817	626	2,025	185	7,653
160	2,716	304	1,813	....	35	5,606	6,549	....	....	....	4,008	46	443	24,766	611	961	39,679	....	41,251	....	....	....	....	....
161	1,238	931	5,401	....	....	3,388	2,612	6,693	....	587	....	71	173	17,760	1,120	115	....	2,569	3,804	....	3,568	....	95	2,663
162	1,405	891	2,166	....	177	5,604	7,805	58	....	224	3,153	615	1,565	22,025	8,851	9,518	14,352	18,073	50,774	6,105	29,823	3,529	804	39,821
163	1,526	2,463	6,712	....	145	3,605	1,988	353	....	....	805	1,000	218	10,139	609	3,913	....	765	5,317	1,496	2,664	1,534	136	5,830
164	524	167	1,776	....	218	1,130	4,060	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

No.	Township Municipalities and Counties in which located.	Population, 1900.	No. of acres assessed, 1900.	Assessed value of real and personal property and income taxable, 1900.	Taxes imposed for all purposes, 1900.			Receipts, 1899.								
					Total.	Per head.	Mills on $.	Balance from 1898.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debenture.	Miscellaneous.	Total receipts.
				$	$	$ c.		$	$	$	$	$	$	$	$	$
165	Euphrasia, Grey	3,241	72,000	1,268,465	11,285	3 48	8.9	170	10,638	21	.....	.....	2,000	.....	2	12,831
166	Faraday, Hastings	1,032	48,657	79,590	3,112	3 02	39.1	125	3,233	206	.....	.....	.....	.....	224	3,787
167	Fenelon, Victoria	2,282	51,559	744,110	8,685	3 81	11.7	733	8,891	48	.....	.....	800	.....	197	10,669
168	Ferris, Nipissing	762	36,195	68,208	1,718	2 25	27.2	793	1,550	.....	.....	8	400	.....	83	2,834
169	Finch, Stormont	3,008	51,222	666,900	13,410	4 46	20.1	799	11,432	418	.....	.....	1,240	7,266	1,539	24,694
170	Fitzroy, Carleton	2,400	60,187	762,367	10,269	4 28	13.5	467	9,261	44	.....	.....	800	.....	78	10,650
171	Flamboro E., Wentworth	2,358	33,739	1,708,638	8,643	3 67	5.1	1,932	9,348	235	.....	23	1,000	.....	83	12,627
172	Flamboro W., Wentworth	2,759	31,088	1,278,350	9,885	3 58	7.7	2,228	11,029	207	39	601	1,200	.....	244	15,548
173	Flos, Simcoe	3,355	62,694	980,603	16,272	4 85	16 6	597	14,851	104	.....	37	2,115	3,200	1,035	21,939
174	Foley, Parry Sound	481	31,260	81,153	1 039	2 16	12 8	520	969	155	.....	.....	.....	.....	27	1,671
175	Fredericksburg N., Lennox and Addington	1,414	24,437	713,275	6,857	4 85	9.6	1,883	7,325	.....	700	58	700	.....	43	10,709
176	Fredericksburg S., Lennox and Addington	1,018	20,340	568,190	5,688	5 59	10.0	421	4,778	.....	.....	91	1,521	.....	15	6,826
177	Fullarton, Perth	2,219	40,289	1,897,675	12,709	5 73	6.7	1,938	14,566	58	.....	.....	2,000	.....	628	19,190
178	Gainsborough, Lincoln	2,397	39,831	1,058,473	8,758	3 65	8.3	656	7,800	.....	.....	.....	500	.....	155	9,105
179	Galway and Cavendish, Peterborough	1,110	48,942	49,635	1,368	1 23	27.6	28	1,193	.....	.....	.....	.....	.....	537	1,758
180	Garafraxa E., Dufferin	1,807	40,661	1,119,350	10,531	5 83	9.4	820	8,617	.....	.....	.....	5,000	5,000	85	19,522
181	Garafraxa W., Wellington	2,311	47,615	1,609,100	11,176	4 84	6.9	292	16,312	.....	.....	2	6,800	.....	39	23,445
182	Georgina, York	1,652	35,171	647,730	6,022	3 65	9.3	220	5,544	85	.....	.....	200	.....	223	6,272
183	Glamorgan, Haliburton	475	20 333	43,513	1,352	2 85	31.1	37	1,213	.....	.....	.....	.....	.....	409	1,659
184	Glanford, Wentworth	1,624	23,628	1,068,600	5,646	3 48	5.3	219	5,857	32	313	328	.....	.....	3	6,752
185	Glenelg, Grey	2,733	67,611	664,547	8,801	3 22	13.2	1,416	9,739	36	185	10	1,900	.....	168	13,444
186	Gloucester, Carleton	6,118	84,972	1,414,000	21,722	3 55	15 4	.....	23,972	539	.....	29	500	1,300	372	26,712
187	Goderich, Huron	2,413	52,307	1,486,400	9,481	3 93	6.4	3,008	9,035	3	.....	.....	1,450	.....	2	13,498
188	Gordon, Manitoulin	667	26,240	112,892	1,710	2 56	15.1	541	1,696	.....	.....	.....	.....	.....	.....	2,237
189	Gosfield N., Essex	1,969	28,013	738,405	11,293	5 74	15.3	4,790	10,028	20	.....	149	.....	4,633	173	19,693
190	Gosfield S., Essex	2,369	30,038	1,040,895	14,895	6 29	14.3	545	15,753	203	.....	13	4,000	1,144	37	21,696
191	Goulbourn, Carleton	2,517	65,125	839,350	9,135	3 63	10 9	2,181	8,787	44	.....	323	600	.....	42	11,977
192	Gower N., Carleton	2,115	33,218	881,500	7,891	3 73	8.9	530	7,710	80	13	.....	.....	.....	3	8,336
193	Gower S., Grenville	790	21,736	315,480	2,682	3 39	8.5	812	2,674	7	.....	.....	.....	.....	3	3,496
194	Grantham, Lincoln	1,834	19,093	1,270,480	8,659	4 72	6.8	272	8,410	72	.....	12	300	.....	8	9,074
195	Grattan, Renfrew	1,886	60,285	210,060	3,562	1 89	17.0	445	3,175	.....	.....	.....	400	.....	12	4,032
196	Greenock, Bruce	2,738	64,839	1,400,315	10,413	3 80	7.4	1,240	9,597	143	226	13	550	.....	99	11,868
197	Grey, Huron	3,389	64,778	1,728,460	12,979	3 83	7 5	245	13,778	93	2,585	.....	1,800	1,525	6,735	26,761
198	Griffith and Matawatchan, Renfrew	760	23,346	24,150	1,095	1 46	48 5	49	947	.....	.....	.....	.....	.....	5	992

No.	Disbursements, 1899.														Assets on December 31, 1899.					Liabilities on December 31, 1899.			
	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Construction of buildings, waterworks, &c	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
165	804	2,069	1,277	..	66	994	5,056	...	.....	96	2,000	46	195	12,603	228	4,977	.....	824	6,029	3,386	825	.....	90	4,301
166	377	70	369	.....	17	113	2,064	.....	.....	264	.....	80	31	3,385	402	2,324	38	1,473	4,237	1,728	1,411	.....	5	3,139
167	442	183	1,170	.....	238	2,092	4,544	.....	.....	94	850	44	384	10,141	528	3,743	.....	317	4,588	3,253	317	200	350	4,120
168	353	348	204	.....	.....	.....	965	.....	.....	23	347	17	18	2,265	569	3,161	.....	555	4,285	918	555	616	75	2,164
169	672	261	1,678	59	20	1,037	5,986	7,902	.....	1,531	.....	1,141	241	20,528	2,166	2,060	.....	2,678	6,904	1,256	24,278	1,240	2,203	28,977
170	791	99	2,273	.....	20	3,632	3,470	.....	.....	.....	.....	20	127	10,432	218	7,845	.....	800	8,863	5,149	.....	800	.....	5,949
171	788	1,776	1,747	.....	316	2,932	3,974	...	.....	.....	.....	...	123	11,656	571	3,469	.....	1,900	6 310	2,239	...	1,025	245	3,509
172	735	2,133	1,428	.....	608	2,854	5,175	.....	.....	957	1,250	176	199	15,515	33	2,399	15,256	6,067	23,755	...	530	3,388	...	3,918
173	1,263	551	1,747	13	174	2,080	7,478	277	25	1,551	3,281	1,559	54	20,053	1,886	10,777	887	946	14,496	5,845	30,796	2,115	79	38,835
174	256	71	130	.....	11	.....	535	.....	.....	.....	.....	.....	.....	1,003	668	305	...	168	1,141	384	...	...	22	406
175	422	109	1,205	.....	141	3,031	2,617	.....	700	350	588	159	73	9,395	1,314	1,496	3,500	....	6,310	469	350	1,288	.....	2,107
176	261	135	758	.....	170	2,061	1,782	.....	90	.....	1,420	.....	91	6,768	58	993	2,499	800	4,350	.....	.....	1,079	.....	1,079
177	585	120	4,907	.....	.....	3,767	5,535	157	.....	.....	2,000	45	240	17,356	1,834	.....	.....	800	2,634	.....	.....	.....	.....	.....
178	418	129	944	.....	...	2,676	3,891	...	.....	.....	500	9	355	8,922	183	993	.....	30	1,206	.....	.....	.....	35	35
179	168	33	8	.....	5	218	1,231	.....	.....	.....	.....	.....	51	1,714	44	2,084	.....	...	2,128	1,180	.....	.....	54	1,234
180	451	303	6,627	.....	40	2,034	3,207	80	.....	490	5,000	194	111	18,537	985	.....	.....	119	1,104	...	6,257	.....	.....	6,257
181	845	159	4,938	.....	.....	2,936	6,165	7	.....	113	6,800	112	30	22,105	1,340	4,038	.....	750	6,128	4,611	.....	.....	213	4,824
182	389	67	743	.....	10	1,398	2,358	.....	.....	588	200	74	246	6,073	199	...	...	300	499	.....	1,078	.....	.....	1,078
183	168	172	182	.....	3	211	679	.....	54	38	.....	16	107	1,630	29	2,427	54	631	3,141	869	629	.....	49	1,547
184	442	89	904	...	136	2,189	2,634	.....	42	.....	.....	.....	170	6,605	147	883	7,342	297	8,669	.....	.....	.....	310	310
185	597	181	1,843	.....	20	3,154	3,613	.....	.....	185	1,900	51	179	11,726	1,718	200	.....	1,000	2,918	.....	.....	.....	.....	.....
186	1,749	1,017	2,198	.....	35	3,975	13,083	1,071	84	425	1,330	360	425	25,752	960	18,558	1,053	3,750	24,321	12,098	6,325	1,500	120	20,043
187	564	179	2,893	16	....	2,205	3,695	.....	.....	.....	1,450	31	18	11,051	2,447	821	.....	.....	3,268	2,254	.....	.....	.....	2,254
188	240	25	250	.....	.....	.....	1,320	.....	.....	.....	.....	.....	50	1,885	352	1,290	.....	173	1,815	525	.....	.....	.....	525
189	413	248	987	2	154	1,193	2,594	9,594	.....	1.778	500	666	274	18,463	1,290	7,520	.....	5,230	14,040	1,875	15,976	.....	2,295	20,146
190	642	1,347	2,184	.....	293	1,645	4,259	2,973	.....	2,938	3,200	1,445	502	21,428	267	11,014	.....	1,150	12,431	1,899	26,061	4,325	2,706	34,991
191	568	126	1,154	.....	43	2,288	4,560	.....	.....	.....	1,100	.....	324	10,163	1,814	1.937	7,691	538	11,980	2,535	.....	.....	1,029	3,564
192	634	212	907	.....	57	1,442	4,192	13	.....	176	.....	55	88	7,776	560	3,602	191	2,500	6,853	1,566	1,210	.....	25	2,801
193	309	43	230	.....	8	723	1,268	.....	.....	.....	.....	.....	29	2,610	886	420	.....	.....	1,306	755	.....	.....	.....	755
194	666	207	1,353	.....	....	2,622	3,412	.....	.....	.....	300	4	151	8,745	329	2,614	.....	.....	2,943	2,642	.....	.....	60	2,702
195	346	39	94	.....	....	658	1,602	.....	.....	.....	400	14	159	3,312	720	645	.....	423	1,788	889	.....	.....	.....	889
196	783	217	2,103	...	58	2,109	4,461	92	232	220	550	95	71	10,991	877	.....	232	.....	1,109	.....	1,356	.....	.....	1,356
197	755	435	2,097	.....	162	3,714	4,681	6,603	.....	2,008	4,376	923	95	25,839	922	1,736	11,087	3,473	17,218	764	19,350	.....	80	20,194
198	167	27	28	.....	5	70	655	.....	.....	.....	.....	.....	15	967	25	325	.....	.....	350	415	.....	.....	67	482

No.	Township Municipalities and Counties in which lo ated.	Population, 1900.	No. of acres assessed, 1900.	Assessed value of real and personal property and income taxable, 1900.	Taxes imposed for all purposes, 1900.			Receipts, 1899.								
					Total.	Per head.	Mills on $.	Balance from 1898.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	$ c.		$	$	$	$	$	$	$	$	$
199	Grimsby N., Lincoln	1,205	15,685	833,425	7,101	5 89	8 5	476	7,220	.....	.....	15	1,400	.....	319	9,430
200	Grimsby S., Lincoln	1,323	18,134	580,050	6,569	4 97	11.3	622	6,204	123	..	.....	.....	.....	7	6,956
201	Guelph, Wellington	2,198	36,661	1,512,150	9,373	4 26	6.2	71	9,805	82	1,592	597	1,400	.....	208	13,755
202	Gwillimbury E., York	3,083	58,436	1,271,790	12,583	4 08	9.9	1,738	11,207	94	1,263	582	....	.....	7	14,831
203	Gwillimbury N., York	1,315	31,577	756,100	5,434	4 13	7.2	308	5,555	71	.....	.....	.....	.....	..	5,934
204	Gwillimbury W., Simcoe	2,330	46,860	1,045,184	10,108	4 34	9.7	937	11,572	32	.....	.....	.....	.....	127	12,668
205	Hagarty, Jones, etc., Renfrew	2,750	76,044	75,000	4,000	1 45	53 3	.....	7,827	294	.....	.....	300	.....	39	8,460
206	Hagerman, Parry Sound	507	18,000	48,701	1,036	2 04	21.3	524	1,144	25	.....	.....	.....	.....	3	1,696
207	Haldimand, Northumberland	3,895	76,390	1,726,370	14,979	3 85	8 7	455	11,137	57	.....	.....	4,500	.. ...	2	16,151
208	Hallam, Algoma	310	14,927	93,122	2,049	6 61	22 0	67	1,400	271	.....	.....	...	.....	.....	1,738
209	Hallowell, Prince Edward	2,846	43,864	1,123,950	9,595	3 37	8.5	34	9,805	17	.....	.....	1,000	.....	.....	10,856
210	Hamilton, Northumberland	3,952	62,115	1,927,830	13,275	3 36	6.9	1,887	16,059	152	50	29	200	.....	204	18,581
211	Harvey, Peterborough	1,063	69,044	175,133	3,230	3 04	18.4	136	2,917	16	.....	.....	26	.....	117	3,212
212	Harwich, Kent	4,503	88,308	3,076,571	28,010	6 22	7.6	8,641	29,643	274	.....	168	3,000	2,272	150	44,148
213	Hawkesbury E., Prescott	4,846	56,433	450,295	10,907	2 25	24.2	1,209	9,605	199	.....	.....	1,500	.....	12	12,525
214	Hawesbury W., Prescott	1,338	28,767	264,107	5,634	4 21	21.3	1,025	3,710	26	.....	.....	200	.....	844	5,805
215	Hay, Huron	3,452	52,501	1,789,860	13,373	3 87	7.5	278	14,992	261	.....	.....	1,300	533	340	17,704
216	Head, Clara and Maria, Renfrew	359	14,538	35,075	1,299	3 62	37 0	171	773	144	.....	12	.....	.....	.....	1,100
217	Hibbert, Perth	2,117	41,432	1,606,975	11,198	5 29	7.0	1,554	10,336	140	.....	.....	400	.....	583	13,013
218	Hillier, Prince Edward	1,537	32,248	737,005	6,486	4 22	8.8	1,259	8,342	20	.....	27	950	.....	394	10,992
219	Hilton, Algoma	372	27,710	54,877	1,377	3 70	25 1	481	1,072	34	45	2	.....	.....	206	1,840
220	Himsworth N., Parry Sound	590	15,232	66,592	1,779	3 02	26.7	646	1,657	124	.....	.....	.....	.....	13	2,440
221	Himsworth S., Parry Sound	1,398	50,132	213,340	3,643	2 61	17.1	212	2,957	163	.....	.....	.....	400	40	3,772
222	Hinchinbrooke, Frontenac	1,219	68,929	189,916	4,758	3 90	25.1	56	4,523	125	.....	.....	300	.....	.....	5,004
223	Holland, Grey	3,127	68,192	783,215	8,107	2 59	10 4	708	8,067	108	.....	.....	.....	.....	37	8,920
224	Hope, Durham	3,268	63,918	2,288,182	10,668	3 26	4.7	.....	11,229	141	.....	1,551	750	.....	131	13,802
225	Horton, Renfrew	1,431	38,057	497,581	3,926	2 74	7 9	440	4,172	2	.....	.....	.....	.....	.....	4,614
226	Houghton, Norfolk	2,031	33,550	459,175	6,458	3 18	14.1	...	6,268	39	.....	.....	653	.....	.....	6,960
227	Howard, Kent	3,504	58,449	2,451,060	19,979	5 70	8.2	396	19,747	76	.....	55	192	5,452	318	26,236
228	Howe Island, Frontenac	342	8,025	52,755	1,480	4 33	28.1	523	1,258	.....	.....	.....	.....	.....	.....	1,781
229	Howick, Huron	3,781	67,575	2,144,276	13,979	3 70	6 5	1,605	13,324	138	150	238	1,660	.....	174	17,289
230	Howland, Bidwell and Sheg., Manitoulin	1,110	39,879	141,900	2,424	2 18	17.1	53	2,181	20	.....	.....	.....	.....	15	2,269
231	Hullett, Huron	2,838	53,558	1,966,210	12,387	4 36	6.3	174	12,105	58	2,222	29	1,000	.....	51	15,639
232	Humberstone, Welland	2,948	31,661	876,625	8,867	3 01	10.1	456	8,510	298	.....	.....	.....	1,524	59	10,847

No.	Disbursements, 1899.													Assets on December 31, 1899.					Liabilities on December 31, 1899.				
	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Construction of buildings, waterworks, &c.	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
199	411	170	1,596	.....	56	2,323	2,186	.....	.....	79	1,400	92	188	8,501	929	400	.....	1,721	3,050	.....	921	.....	921
200	358	74	1,229	.....	1	532	3,166	.....	.....	427	.....	229	82	6,098	858	327	.....	967	2,152	1,067	4,154	.....	5,891
201	814	219	2,263	.....	5	3,030	4,559	.....	1,495	.....	.....	.....	9	309	12,703	1,052	7,406	14,534	115	23,107	4,198	.....	2,400	239	6,837
202	763	197	1,882	.....	37	3,004	5,661	.....	1,203	.....	75	74	131	13,027	1,804	.....	12,974	300	15,078	.....	.....	1,851	.....	1,851
203	380	63	416	.....	33	1,559	2,545	.....	.....	260	.....	26	215	5,497	437	.....	.....	260	697	.....	260	.....	.....	260
204	631	202	1,026	.....	316	4,780	5,441	.....	.....	.....	.....	.....	236	12,632	36	858	.....	200	1,094	.....	.....	.....	.....	.....
205	741	273	736	.....	68	494	4,144	.....	.....	345	1,182	330	47	8,360	100	1,540	2,700	131	4,471	.....	3,955	825	268	5,048
206	198	77	74	4	5	.....	983	.....	.....	.....	.....	.....	10	1,351	345	549	.....	750	1,644	420	.....	.....	30	450
207	1,079	446	2,275	386	412	2,639	6,497	.....	.....	48	500	27	399	14,708	1,443	7,592	.....	3,156	12,191	2,237	283	4,545	99	7,164
208	233	83	154	.....	40	.....	470	.....	.....	.....	.....	.....	19	999	739	469	.....	3,922	5,130	.....	3,647	.....	412	4,059
209	327	209	603	.....	450	2,814	4,958	.....	.....	.....	1,000	19	161	10,541	315	385	.....	.....	700	.....	.....	.....	.....	.....
210	885	248	2,436	.....	254	3,715	6,339	.....	.....	.....	4,000	3	336	18,210	371	4,807	400	2,034	7,612	2,207	.....	200	100	2,507
211	430	25	334	.....	82	420	1,607	.....	.....	124	.....	60	130	3,212	.....	2,524	.....	948	3,472	1,198	948	26	975	3,147
212	1,786	1,256	4,471	1,294	753	5,725	9,744	3,063	1,000	4,706	3,000	785	348	37,931	6,217	4,604	1,000	17,157	28,978	.....	13,610	.....	716	14,326
213	493	194	302	.....	5	2,118	7,074	.....	.....	.....	1,000	33	1,275	12,494	31	2,254	.....	.....	2,285	1,401	.....	519	250	2,170
214	251	172	246	.....	5	19	1,819	.....	.....	1,121	200	838	81	4,752	1,053	1,022	.....	7,652	9,727	.....	15,473	.....	.....	15,473
215	578	333	2,650	.....	64	4,023	5,391	270	.....	1,597	1,800	403	367	17,476	228	768	.....	3,703	4,699	.....	8,206	.....	136	8,342
216	69	2	4	.....	.....	121	762	.....	83	.....	.....	.....	36	1,077	23	998	513	87	1,621	348	600	.....	.....	948
217	558	175	2,200	.....	50	3,388	3,542	197	.....	450	.....	23	1,011	11,594	1,419	.....	.....	750	2,169	.....	.....	.....	.....	.....
218	443	108	378	925	309	1,843	3,624	.....	23	.....	950	48	211	8,862	2,130	114	108	1,000	3,352	1,675	.....	.....	.....	1,675
219	187	70	335	.....	.....	.....	585	.....	76	.....	.....	50	217	1,520	320	2,153	89	1,563	4,125	306	1,000	.....	17	1,322
220	265	73	175	.....	9	.....	1,576	.....	.....	79	.....	80	1	2,258	182	1,183	.....	346	1,711	542	1,249	.....	35	1,826
221	319	72	196	.....	28	.....	2,464	.....	.....	264	.....	106	204	3,653	119	2,778	.....	10	2,907	.....	1,906	.....	116	2,022
222	335	327	712	.....	.....	1,056	2,382	.....	.....	50	.....	3	.....	4,865	133	580	.....	1,000	1,719	.....	.....	311	401	712
223	728	151	871	.....	76	1,728	4,344	.....	.....	369	.....	96	52	8,415	505	964	.....	135	1,604	.....	1,379	.....	.....	1,379
224	891	203	2,276	122	300	2,876	5,573	.....	.....	.....	1,079	.....	324	13,644	158	2,392	34,368	400	37,318	.....	.....	770	.....	770
225	320	117	101	.....	10	923	2,081	.....	.....	110	.....	17	15	3,694	920	1,746	.....	1,610	4,276	423	220	.....	.....	643
226	535	109	1,035	.....	13	800	2,882	14	.....	215	1,008	169	180	6,960	.....	1,374	.....	5,144	6,518	580	3,319	103	20	4,022
227	1,121	179	2,704	.....	169	3,716	8,229	4,505	.....	1,437	.....	284	824	23,159	3,077	2,995	.....	11,243	17,315	172	9,743	192	1,304	11,411
228	109	20	79	.....	.....	564	625	.....	.....	.....	.....	.....	133	1,530	251	321	.....	.....	572	505	.....	.....	63	568
229	836	129	2,183	.....	99	2,547	6,769	21	1,067	.....	1,660	1,329	279	16,919	370	3,642	5,777	2,130	11,919	2,605	14,700	660	.....	17,965
230	210	32	182	.....	10	.....	1,235	.....	.....	.....	.....	.....	48	1,717	552	541	.....	225	1,318	465	.....	.....	225	690
231	777	245	3,516	.....	5	2,414	4,404	20	1,922	599	1,000	381	240	15,523	116	.....	1,922	.....	2,038	.....	7,450	.....	150	7,600
232	637	273	1,216	75	3	2,102	4,025	1,365	.....	408	.....	73	139	10,316	531	966	.....	4,101	5,598	.....	1,851	.....	.....	1,851

No.	Township Municipalities and Counties in which located.	Population, 1900.	No. of acres assessed, 1900.	Assessed value of real and personal property and income taxable, 1900.	Taxes imposed for all purposes, 1900.			Receipts, 1899.								
					Total.	Per head.	Mills on $	Balance from 1898.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	$ c.		$	$	$	$	$	$	$	$	$
233	Humphrey, Parry Sound	490	27,807	121,843	1,547	3 16	12.7	197	2,342	63	.....	.....	.....	.....	51	2,653
234	Hungerford, Hastings	3,492	93,380	743,465	11,567	3 31	15.6	.....	11,429	261	.....	.....	1,661	.....	325	13,676
235	Huntingdon, Hastings	2,462	53,849	431,397	7,133	2 89	16.5	162	6,956	20	.....	.....	.....	.....	248	7,386
236	Huntley, Carleton	2,142	61,869	450,940	7,087	3 31	15.7	1,717	6,909	60	.....	.....	.....	.....	.....	8,686
237	Huron, Bruce	3 308	57,442	1,497,926	15,669	4 74	10.5	733	13,601	250	.....	32	.....	1,000	89	15,705
238	Innisfil, Simcoe	3,547	67,964	1,386,174	13,439	3 79	9.8	1,684	16,863	106	.....	.....	.....	.....	1,435	20,088
239	Jocelyn, Algoma	453	25,181	56,143	1.235	2 73	22.0	187	1,726	3	.....	.....	.....	.....	.....	1,916
240	Johnston, Tarbutt, etc., Algoma	968	36,066	117,169	1,460	1 61	12.5	108	1,527	.....	50	1	200	.....	7	1,893
241	Joly, Parry Sound	264	16,686	39,850	637	2 41	16.0	93	496	.....	.....	.....	150	.....	17	756
242	Kaladar and Ang., Lennox and Addington	1,257	57,756	71.811	2,821	2 24	39.3	81	2,862	33	.....	.....	.....	.....	80	3,056
243	Keewatin, Rainy River	976	2,560	269,850	5,941	6 09	22 0	.....	4,415	527	.....	.....	.....	.....	.....	4,942
244	Kennebec, Frontenac	1,363	40,278	90,886	2,753	2 02	30 3	310	2,900	35	.....	.....	.....	.....	11	3,256
245	Kenyon, Glengarry	3,866	78,610	739,410	10,961	2 84	14.8	976	11,294	228	.....	10	1,368	.....	110	13,986
246	Keppel, Grey	3,563	89,298	697,235	11,352	3 19	16.3	1,322	9,221	32	4,239	40	1,000	.....	600	16,454
247	Kincardine, Bruce	2,986	59,200	1,561,420	11.075	3 71	7.1	806	8,994	26	.....	.....	.....	.....	395	10.221
248	King, York	5,100	87,656	2,817,925	21,819	4 28	7.7	.....	21,485	549	7,696	1,239	2,600	.....	77	33,646
249	Kingston, Frontenac	2,480	51,831	1,089,986	14,078	5 68	12.9	7,650	12,725	119	.....	131	.....	.....	85	20,710
250	Kinloss, Bruce	2,264	46,275	1,139,585	7,865	3 47	6.9	1,528	6,915	66	.....	15	.....	.....	19	8,543
251	Kitley, Leeds	1,893	47,012	1,037,850	7,476	3 95	7.2	2,787	7,266	118	.....	11	.....	.....	14	10,196
252	Laird, Algoma	370	15,822	89,395	1.273	3 44	14.2	107	1,130	.....	72	.....	300	350	24	1,983
253	Lanark, Lanark	1,698	57,798	440,130	5,928	3 08	11.9	545	4,939	35	.....	20	.....	1,200	69	6,808
254	Lancaster, Glengarry	3 533	57,101	923,883	10,605	3 00	11.5	1,056	10,444	180	.....	.....	.....	.....	124	11,803
255	Lavant, Lanark	485	44,753	56,100	1,693	3 49	30.2	210	1,429	112	.....	.....	.....	.....	.....	1,751
256	Laxton, Digby and Longford, Victoria	761	72,806	74,329	2,293	3 01	30.8	521	2,573	9	.....	497	.....	.....	412	4,012
257	Leeds and Lansdowne Front, Leeds	2,671	56,350	1,019,790	12.871	4 82	12.6	1,516	13,677	135	.....	10	2,500	.....	53	17,891
258	Leeds and Lansdowne Rear, Leeds	2,262	44,472	575.070	8,348	3 69	14.5	2,379	7,840	131	.....	78	.....	.....	.....	10,428
259	Limerick, Hastings	558	44,443	54,303	1,186	2 13	21.8	122	1,389	20	.....	.....	.....	.....	282	1,813
260	Lindsay and St. Edmunds, Bruce	989	106,159	98,324	3,470	3 51	35.3	190	3,595	.....	.....	46	1,300	.....	260	5,391
261	Lobo, Middlesex	2,686	47,284	1,753,130	15,049	5 60	8.6	7,247	21,253	187	.....	45	.....	.....	258	28,990
262	Lochiel, Glengarry	4,391	71,459	1,002,075	11,537	2 63	11.5	27	11,149	415	.....	1	.....	.....	161	11,753
263	Logan, Perth	2,961	53,774	1,898,145	17,031	5 75	9.0	2,142	13,510	67	818	21	384	5,940	2,027	24,909
264	London, Middlesex	8,512	99,833	4,149,410	41,549	4 88	10.0	18,430	35,852	457	.....	276	3,000	.....	608	58,623
265	Longueuil, Prescott	941	17,494	170,675	2,656	2 82	15.6	.....	2,475	28	.....	.....	120	.....	.....	2,623
266	Loughborough, Frontenac	1,688	50,509	383,452	7,463	4 42	19.5	58	5,941	60	.....	100	.....	.....	.....	6,159

No.	Disbursements, 1899.													Assets on December 31, 1899.					Liabilities on December 31, 1899.				
	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Construction of buildings, waterworks, &c.	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
233	285	93	234	....	43	.....	993	.....	.....	132	.....	44	....	1,824	829	1,037	.....	668	2,534	838	611	.....	55	1,504
234	711	137	1,586	....	278	3,481	5,810	.....	.....	182	1,234	35	222	13,676	.....	7,590	.....	3,399	10,989	3,648	399	1,661	500	6,208
235	547	191	273	....	85	2,060	4,021	.....	.....	100	.....	36	....	7,313	73	4,292	.....	900	5,265	3,167	400	.....	60	3,627
236	831	102	1,289	....	120	1,787	3,040	.....	.....	74	.....	29	72	7,344	1,342	1,781	.....	1,400	4,523	1,940	416	.....	43	2,399
237	759	428	3,294	....	15	2,635	6,378	.....	.....	413	.....	79	170	14,171	1,534	1,455	.....	800	3,789	.....	2,140	.....	.....	2,140
238	1,385	461	3,006	....	175	6,759	6,094	.....	.....	329	.....	105	49	18,363	1,726	1,973	.....	360	4,058	.....	1,424	.....	170	1,594
239	228	54	313	....	.....	.....	733	.....	28	.....	.....	42	....	1,398	518	368	214	1,031	2,131	.....	600	.....	.....	600
240	288	63	388	....	10	.....	666	.....	100	.....	.....	30	51	1,596	297	1,138	100	400	1,935	565	500	200	48	1,313
241	152	49	61	....	.....	.....	182	.....	.....	.....	100	7	8	559	197	394	.....	.....	591	355	.....	156	61	572
242	283	124	247	....	.....	.....	1,629	.....	.....	.....	.....	.....	77	2,370	686	1,564	.....	643	2,893	1,763	.....	300	14	2,077
243	401	121	618	....	105	.....	2,664	.....	.....	427	26	325	8	4,695	247	396	.....	600	1,243	.....	6,661	.....	200	6,861
244	252	72	365	....	155	192	1,892	.....	.....	.....	.....	.....	135	3,063	193	2,610	.....	600	3,403	2,619	.....	.....	176	2,795
245	599	240	1,236	....	44	1,402	6,905	78	.....	.....	2,722	.....	186	13,412	574	2,019	.....	1,500	4,093	.....	.....	1,368	18	1,386
246	768	345	1,779	....	313	1,231	3,911	.....	2,234	2,831	1,000	586	463	15,461	993	8,087	1,035	65	10,180	2,305	9,229	1,900	373	12,907
247	651	229	1,927	....	33	2,546	4,454	.....	.....	.....	.....	.....	93	9,933	288	312	.....	466	1,066	.....	.....	.....	.....	.....
248	1,242	561	3,963	163	102	5,815	8,529	.....	7,528	400	4,728	336	279	33,646	.....	41	39,908	2,947	42,896	.....	972	1,714	57	2,743
249	603	440	683	415	236	7,046	4,640	.....	.....	.....	.....	.....	159	14,222	6,488	2,573	1,650	1,675	12,386	7,189	.....	.....	681	7,870
250	611	129	1,112	....	32	1,660	2,973	76	.....	.....	.....	.....	56	6,649	1,894	15	.....	38	1,947	.....	.....	.....	.....	.....
251	531	175	1,195	....	5	3,326	3,912	.....	.....	.....	.....	.....	116	9,260	936	136	.....	2,000	3,072	.....	.....	.....	.....	.....
252	156	71	466	....	.....	.....	946	.....	155	45	.....	24	14	1,876	107	178	155	1,130	1,570	.....	710	300	....	1,010
253	418	123	279	1,518	20	925	2,940	.....	.....	.....	.....	.....	22	6,245	563	1,179	.....	1,800	3,542	.....	1,200	.....	391	1,591
254	795	81	1,274	127	46	1,725	6,584	26	.....	.....	.....	.....	467	11,065	738	4,709	.....	.....	5,447	1,770	.....	.....	....	1,770
255	186	53	104	....	....	132	1,263	.....	.....	.....	.....	.....	72	1,750	1	156	.....	.....	157	.....	.....	.....	.....	.....
256	282	158	124	....	....	249	1,285	.....	885	.....	.....	261	46	3,280	732	.....	6,107	.....	6,839	.....	5,000	...	....	5,000
257	712	260	3,735	....	83	3,994	5,726	.....	.....	.....	2,500	74	72	17,156	735	305	.....	5,000	6,040	.....	.....	.....	80	80
258	539	133	705	....	10	2,588	4,662	.....	230	.....	.....	250	223	9,290	1,138	204	2,754	.....	4,096	.....	5,000	....	154	5,154
259	282	83	324	....	5	95	765	.....	.....	.....	.....	.....	49	1,603	210	1,090	.....	285	1,585	777	.....	.....	97	874
260	342	254	930	....	28	420	1,091	.....	275	.....	874	40	858	5,112	279	4,154	275	.....	4,708	.....	.....	2,336	478	2,814
261	862	432	5,531	....	274	4,704	4,485	177	.....	263	....	171	223	17,122	11,868	36	.....	4,728	16,632	4,364	3,423	.....	223	8,010
262	794	366	1,696	....	99	1,321	6,864	331	46	75	.....	14	145	11,751	2	11,426	92	70	11,589	8,215	230	.....	1,037	9,482
263	883	1,648	3,968	240	161	3,411	5,317	5,647	2,260	860	.....	379	185	24,909	.....	483	2,260	1,869	4,612	.....	12,866	384	8	13,258
264	1,750	595	14,730	....	578	10,168	11,772	.....	.....	223	3,000	95	1,538	44,449	14,174	9,232	.....	3,460	26,866	9,752	1,460	.....	.....	11,212
265	149	41	56	....	3	727	1,566	74	.....	.....	.....	.....	7	2,623	.....	1,240	.....	.....	1,240	1,039	.....	120	....	1,159
266	431	130	615	....	39	2,313	2,150	.....	.....	289	.....	57	132	6,156	3	4,101	.....	.....	4,104	2,346	860	.....	439	3,645

No.	Township Municipalities and Counties in which located.	Population, 1900.	No. of acres assessed, 1900.	Assessed value of real and personal property and income taxable, 1900.	Taxes imposed for all purposes, 1900.			Receipts, 1899.								
					Total.	Per head.	Mills on $	Balance from 1898.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	$		$	$	$	$	$	$	$	$	$
267	Louth, Lincoln	1,685	18,696	717,195	7,798	4 63	10.9	184	8,925	55	.....	26	.....	.....	242	9,432
268	Luther E., Dufferin	1,579	38,037	561,015	8,593	5 44	15.3	1,033	7,989	.....	.....	.....	1,800	1,350	567	12,739
269	Luther W., Wellington	2,095	49,644	849,225	9,400	4 49	11.1	262	10,077	37	.....	.....	1,900	600	805	13,681
270	Lutterworth, Haliburton	424	23,834	55,903	1,368	3 23	38 1	288	1,332	.....	.....	.....	.....	.....	93	1,713
271	McDougall, Parry Sound	469	29,964	66,228	1,769	3 77	26.7	387	1,361	2	.....	.....	317	.....	16	2,082
272	McGillivray, Middlesex	3,096	66,772	2,506,275	15,199	4 91	7 6	1,753	14,274	29	.....	13	2,100	.....	27	18,196
273	McIrvine (Fort Frances), Rainy River	307	5,400	169,204	4,620	15 05	27 3	1	1,283	405	.....	.....	1,768	.....	169	3,626
274	McKellar, Parry Sound	545	32,377	75,550	2,167	3 98	28.7	75	2,117	41	.....	.....	.....	560	60	2,793
275	McKillop, Huron	2,653	52,110	2,000,700	11,261	4 24	5.6	2,283	11,180	44	.....	751	2,500	1,714	1,046	19,518
276	McKim, Nipissing	1,893	17,436	118,698	4,462	2 36	37.6	1,370	3,308	36	.....	.....	.....	.....	19	4,733
277	McLean and Ridout, Muskoka	700	39,835	100,030	1,723	2 46	17.2	425	1,465	62	.....	.....	.....	.....	93	2,045
278	McMurrich, Parry Sound	662	45,785	116,771	1,904	2 88	16.3	44	1,411	25	.....	.....	.....	.....	300	1,780
279	McNab, Renfrew	3,383	62,616	1,124,970	8,654	2 56	7.7	981	8,292	135	.....	16	.....	850	1,500	11,774
280	Macaulay, Muskoka	633	39,456	98,674	2,176	3 44	22.1	260	2,059	23	.....	.....	.....	.....	12	2,354
281	Macdonald, Meredith & Aberdeen, Algoma	630	23,069	59,901	1,293	2 05	21.6	106	1,413	.....	.....	5	.....	.....	3	1,527
282	Machar, Parry Sound	770	36,222	104,494	2,097	2 72	20.1	510	1,884	29	.....	.....	.....	.....	31	2,454
283	Madoc, Hastings	2,652	67,747	491,675	10,459	3 94	21.3	1,319	9,863	47	.....	.....	1,138	32,000	6,641	51,008
284	Maidstone, Essex	2,846	44,547	806,970	17,682	6 00	21.2	1,141	14,098	90	.....	.....	3,500	3,334	531	22,694
285	Malahide, Elgin	3,715	62,353	1,920,610	24,319	6 55	12.7	6,028	21,859	63	.....	.....	1,500	3,437	73	32,960
286	Malden, Essex	1,290	20,962	713,045	7,062	5 47	9.9	342	7,623	68	.....	.....	1,900	.....	154	10,087
287	Manvers, Durham	2,860	69,645	1,219,240	10,363	3 62	8.5	175	13,107	218	.....	.....	495	1,000	91	15,086
288	Mara, Ontario	2,836	61,472	951,060	10,476	3 69	11.0	661	10,015	157	.....	.....	3,465	1,598	52	15,948
289	March, Carleton	1,127	28,029	366,756	3,336	2 96	9.1	517	3,835	33	.....	48	.....	.....	11	4,444
290	Mariposa, Victoria	3,910	74,843	2,590,110	19,693	5 04	7.6	9,866	19,016	41	.....	193	.....	.....	443	29,559
291	Markham, York	6,302	66,634	3,209,070	22,237	4 19	6.9	8,670	23,150	401	.....	.....	.....	.....	.....	32,221
292	Marlborough, Carleton	1,541	56,971	456,665	4,838	3 14	10.6	423	5,265	30	.....	.....	.....	.....	.....	5,718
293	Marmora and Lake, Hastings	1,878	103,517	305,778	7,897	4 21	25.8	320	6,604	140	.....	.....	1,678	.....	272	9,014
294	Maryborough, Wellington	2,964	56,456	1,731,000	14,728	4 97	8.5	4,502	14,274	74	.....	18	1,000	1,000	115	20,983
295	Marysburg N., Prince Edward	1,182	23,571	473,525	4,097	3 47	8.7	1,050	4,363	15	153	197	.....	.....	.....	5,778
296	Marysburg S., Prince Edward	1,187	23,280	354,640	3,721	3 14	10.5	256	3,876	1	404	16	683	.....	.....	5,236
297	Mattawan, Nipissing	256	11,998	23,895	518	2 03	21.7	61	395	.....	250	.....	150	.....	.....	856
298	Matchedash, Simcoe	456	19,672	54,680	1,002	2 20	18.3	379	1,256	69	107	14	.....	.....	115	1,939
299	Matilda, Dundas	3,845	62,602	1,336,336	18,810	4 89	14.1	.....	19,225	.....	.....	.....	7,545	800	49	27,619
300	Mayo, Hastings	557	19,035	27,140	1,411	2 53	52.0	145	1,879	.....	.....	.....	.....	.....	217	2,241

No.	Disbursements, 1899.													Assets on December 31, 1899.				Liabilities on December, 31, 1899			
	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Construction of buildings, waterworks, &c	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
267	409	99	1,433	....	....	3,483	3,177	.....	.....	365	...	35	230	9,231	201	1,247	.....	523	1,971	.....	845	....	75	420
268	348	558	1,219	....	12	1,399	4,605	.....	.....	1,198	1,800	537	125	11,801	938	639	.....	355	1,932	....	10,194	....	133	10,327
269	599	506	920	....	....	1,065	4,143	148	50	1,136	1,900	399	175	11,041	2,640	720	200	548	4,108	2,861	7,566	....	228	10,655
270	163	37	213	...	1	259	814	.....	.....	.....	.....	.....	6	1 493	220	876	.....	502	1,598	534	.....	....	20	554
271	198	44	458	....	5	.....	576	.....	.....	.....	300	20	300	1,901	181	1,756	.....	50	1,987	634	.....	320	33	987
272	736	182	5,069	....	31	2,696	6,253	.....	.....	.....	2,100	44	214	17,325	871	177	.....	1,100	2,148	.....	.....	....	.....	.....
273	342	186	856	....	52	.....	587	.....	.....	38	870	159	122	3,212	414	4,458	.....	.....	4,872	1,120	2,462	898	135	4,615
274	212	88	230	45	21	.....	1,884	.....	.....	100	.....	18	95	2,693	100	1,234	.....	200	1,534	580	600	....	20	1,200
275	730	524	4,489	....	62	2,349	3,960	3,461	.....	72	2,500	102	223	18,472	1,046	.....	14,582	2,355	17,983	125	1 642	....	2,933	4,700
276	490	62	1,077	225	47	.....	2,092	.....	.....	115	.....	48	98	4.254	479	3,424	.....	1,102	5,005	2,028	687	....	68	2,783
277	240	80	271	....	19	.....	613	.....	.....	155	.....	139	83	1,600	445	.....	.....	1,200	1,645	.....	1,042	....	....	1,042
278	199	95	99	....	9	.....	793	.....	.....	144	..	45	89	1,473	307	2,704	.....	271	3,282	1,097	595	....	...	1,692
279	646	184	606	....	98	1,510	4,910	.....	.....	482	2,000	106	42	10,584	1,190	2,155	.....	1,188	4,533	710	638	....	248	1,596
280	291	99	422	....	81	.....	1,215	.....	.....	.....	7	22	74	2,211	143	728	.....	30	901	477	.....	200	30	707
281	146	31	282	....	3	.....	646	.....	.....	...	.....	.....	131	1,239	288	335	.....	.....	623	72	.....	....	....	72
282	185	64	140	....	16	.....	1,559	.....	.....	62	.....	86	55	2,167	287	1,177	.....	200	1,664	820	1,378	...	337	2,536
283	679	685	486	....	110	2,955	4,860	.....	.....	37,914	2,386	659	274	51,008	.....	7,543	.....	650	8,193	.....	32, 000	1,138	200	33,338
284	1,454	446	2,104	....	475	1,854	4,366	5,140	.....	2,413	2,954	659	540	22,405	289	20, 125	.....	1,655	22,069	6,633	14, 699	3,602	1,352	26,286
285	850	515	7,749	....	58	5,783	6.715	4,060	.....	849	1,500	485	167	28,731	4.229	1,487	.....	350	6,066	.....	13, 180	....	515	13,695
286	599	151	2,122	....	49	1,134	2,883	....	.....	64	2,400	132	315	9,849	238	5,153	.....	1,096	6,487	2,622	318	1,983	188	5,111
287	824	200	1,070	....	328	1,815	8,868	.....	.....	139	495	23	364	14,126	960	967	.....	57	1.984	.....	1,148	..	76	1,224
288	1,024	173	2,515	....	119	1,050	5,786	620	.....	520	3,000	152	271	15,230	718	.....	.....	3,998	4,716	.....	2,587	465	....	3,052
289	330	95	504	....	....	819	2,088	28	.....	....	.....	....	18	3,882	562	1,277	400	1,000	3,239	889	.....	....	....	889
290	1,060	298	1,823	....	353	5,567	7,913	5	.....	1,079	.....	455	394	18,947	10, 612	84	.....	8,541	19,237	4,871	9,357	....	54	14,282
291	683	1,728	5,683	....	93	6,397	9,393	.....	.....	209	400	114	157	24,857	7,364	1,399	.....	1,801	10,564	7,528	1,784	....	550	9,862
292	499	90	582	....	70	1,073	2,405	.....	.....	141	135	18	460	5,473	245	1,841	.....	.....	2,086	1,158	303	....	305	1,766
293	642	112	750	....	189	1,634	3,866	.....	.....	366	982	177	273	8,991	23	4,364	.....	4,504	8,891	1,798	2,564	1,678	321	6,361
294	879	170	2,677	....	17	3,590	7,051	190	.....	120	1,000	41	240	15,975	5,008	692	.....	473	6,173	4,974	1,360	....	124	6,458
295	191	153	75	....	237	2,142	2.685	.....	.....	.....	159	.....	82	5,724	54	115	6,899	1,075	8,143	.....	.....	....	20	20
296	218	287	115	....	124	971	2,960	.....	192	.....	.....	70	14	4,948	288	224	9,852	1,065	11,429	.....	.....	1,949	...	1,949
297	154	41	85	....	....	.....	419	.....	.....	...	80	14	...	793	63	481	.....	90	634	518	.....	170	211	899
298	140	15	264	....	....	145	515	.....	.....	106	.....	16	29	1,230	709	212	264	.....	1,185	566	265	....	....	831
299	743	1,559	1,923	....	398	4,919	7,302	199	.....	2,946	6,520	1,110	.....	27,619	.....	4,246	.....	763	5,009	1,515	16, 726	2,500	1,401	22,142
300	357	85	288	....	....	76	1,013	.....	.....	145	.....	33	29	2,026	215	1,175	.....	280	1,670	868	280	....	190	1,338

No.	Township Municipalities and Counties in which located.	Population, 1900.	No. of acres assessed, 1900.	Assessed value of real and personal property and income taxable, 1900.	Taxes imposed for all purposes, 1900.			Receipts, 1899.								
					Total.	Per head.	Mills on $	Balance from 1898.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	$ c.	$	$	$	$	$	$	$	$	$	$
301	Medonte, Simcoe	3,954	65,568	561,028	11,462	2 90	20.4	1,669	12,960	196	.....	16	.....	638	71	15,549
302	Medora and Wood, Muskoka	920	59,002	221,783	4,418	4 80	19.9	400	3,961	36	.....	.....	60	.....	107	4,564
303	Melancthon, Dufferin	3,251	74,615	825,076	12,421	3 82	15.1	.....	15,828	2	.....	62	3,475	.....	50	19,417
304	Mersea, Essex	4,172	62,025	1,807,226	28,742	6 89	15.9	3,217	30,257	114	.....	.....	1,322	3,485	856	39,251
305	Metcalfe, Middlesex	1,517	36,192	1,001,820	10,771	7 10	10.8	1,301	12,500	16	.....	.....	500	899	69	15,285
306	Middleton, Norfolk	2,689	45,334	757,558	9,843	3 66	13.0	13	10,912	46	.....	18	.....	1,357	505	12,851
307	Minden, Haliburton	1,166	36,566	85,540	3,376	2 89	39.5	128	3,831	3	.....	.....	.....	400	90	4,452
308	Minto, Wellington	2,974	69,403	1,848,315	13,641	4 59	7.4	188	17,181	41	572	10	1,100	.....	69	19,161
309	Monaghan N., Peterborough	903	13,950	603,350	4,729	5 24	7.8	214	5,927	46	.....	.....	1,200	.....	35	7,422
310	Monaghan S., Northumberland	850	18,358	536,585	3,654	4 30	6.8	280	4,752	55	.....	52	.....	.....	1	5,140
311	Monck, Muskoka	886	28,377	197,811	2,713	3 06	13.7	588	2,337	11	.....	.....	.....	.....	84	3,020
312	Monmouth, Haliburton	508	25,013	30,579	2,227	4 38	72.8	33	1,564	.....	.....	.....	407	.....	.....	2,004
313	Mono, Dufferin	3,133	69,136	1,592,905	12,146	3 88	7.6	22	13,801	45	.....	.....	3,000	.....	6	16,874
314	Montague, Lanark	2,208	62,622	583,265	6,724	3 05	11.5	283	7,563	25	.....	7	.....	.....	.....	7,878
315	Monteagle and Herschel, Hastings	1,813	67,052	70,949	3,101	1 71	43.7	.....	3,108	44	.....	.....	345	.....	262	3,759
316	Moore, Lambton	4,463	73,260	1,808,715	27,104	6 07	15.0	4,060	24,731	413	.....	.....	3,000	5,181	970	38,355
317	Mornington, Perth	2,913	50,055	1,735,775	16,763	5 75	9.7	720	18,559	308	.....	.....	3,722	3,615	492	27,409
318	Morris, Huron	2,485	55,090	1,745,285	8,943	3 60	5.1	2,543	8,519	41	.....	5	1,100	.....	61	12,269
319	Morrison, Muskoka	840	23,074	78,044	1,463	1 74	18.7	135	1,999	40	.....	.....	.....	.....	24	2,198
320	Mosa, Middlesex	2,534	47,274	580,589	11,942	4 71	20.6	.....	17,351	11	.....	.....	500	869	221	18,952
321	Moulton, Haldimand	1,818	27,000	591,880	5,981	3 29	10.1	.....	6,550	.....	.....	196	851	.....	266	7,863
322	Mountain, Dundas	3,311	56,648	1,343,648	13,156	3 97	9.8	1,684	11,831	334	103	.....	1,600	.....	13	15,565
323	Mulmur, Dufferin	2,910	70,221	1,301,325	12,669	4 35	9.7	390	11,774	52	.....	.....	1,300	.....	11	13,527
324	Murray, Northumberland	2,708	48,479	1,183,875	9,304	3 44	7.9	.....	8,668	52	.....	.....	200	.....	.....	8,920
325	Muskoka, Muskoka	730	32,457	96,625	1,942	2 66	20.1	157	2,187	1	.....	.....	.....	.....	213	2,558
326	Nairn and Lorne, Algoma	186	11,837	43,262	940	5 05	21.7	10	1,069	64	.....	.....	.....	.....	.....	1,143
327	Nassagaweya, Halton	2,274	44,795	1,005,735	7,499	3 30	7.5	127	7,346	47	.....	488	.....	.....	38	8,046
328	Neebing, Thunder Bay	234	123,213	166,340	3,806	16 26	22.9	195	3,681	28	.....	28	794	.....	51	4,777
329	Nelson, Halton	2,685	46,346	1,774,120	11,652	4 34	6.6	811	11,141	.....	253	1,697	.....	.....	70	13,972
330	Nepean, Carleton	4,809	57,908	2,305,461	17,016	3 54	7.4	1,371	17,669	195	.....	798	.....	.....	476	20,509
331	Niagara, Lincoln	1,762	22,344	931,655	11,498	6 53	12.3	.....	9,058	89	.....	8	700	.....	.....	9,855
332	Nichol, Wellington	1,686	26,693	1,081,305	6,959	4 13	6.4	.....	7,548	95	.....	10	.....	.....	168	7,821
333	Nipissing, Parry Sound	439	29,199	101,392	1,086	2 47	10.7	12	1,209	36	.....	.....	.....	.....	81	1,338
334	Nissouri E., Oxford	2,388	46,426	2,126,125	12,276	5 14	5.8	1,162	12,428	52	.....	23	1,000	.....	10	14,675

No.	Disbursements, 1899.														Assets on December 31, 1899.					Liabilities on December 31, 1899.				
	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Construction of buildings, waterworks &c	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
301	836	332	1,792	86	124	3,500	5,455	620	.....	626	....	137	10	13,518	2,031	2,071	.....	2,786	6,888	918	2,827	.....	....	3,745
302	312	299	700	....	....	....	2,415	.....	60	200	.....	81	34	4,101	463	4,790	150	675	6,078	2,696	1,150	60	940	4,846
303	533	303	1,882	...	109	2,411	6,354	358	157	607	5,989	558	156	19,417	.....	1,905	1,954	1,272	5,131	2,961	6,676	.....	....	9,637
304	1,445	565	4,598	37	473	2,507	8,278	7,922	.....	10,055	....	3,145	226	39,251	.....	20,810	.....	7,042	27,852	2,907	54,004	1,322	4,748	62,981
305	656	283	2,189	...	....	2,658	2,393	1,673	.....	228	2,000	93	695	12,868	2,417	2,502	.....	1,974	6,893	2,453	671	502	366	3,992
306	645	341	2,826	....	65	1,913	3,451	406	.....	770	.....	227	1,524	12,168	683	3,401	.....	2,900	6,984	1,838	4,216	.....	....	6,054
307	282	68	300	....	4	771	2,807	.....	.....	99	.....	39	65	4,435	17	2,800	.....	1,085	3,902	2,946	956	.....	71	3,967
308	904	261	2,098	....	34	8,181	4,927	502	21	.....	1,100	24	94	18,146	1,015	609	21	1,411	3,056	2	.....	.....	119	121
309	362	73	1,522	....	11	1,224	1,350	.....	.....	41	1,300	35	43	5,961	1,461	.....	.....	1,297	2,758	1,224	41	.....	....	1,265
310	264	519	524	....	45	840	1,807	.....	370	.....	.....	118	15	4,502	638	89	1,480	21	2,228	.....	2,000	.....	....	2,000
311	281	91	525	....	5	....	1,149	.....	.....	229	.....	106	9	2,395	625	45	.....	.....	670	.....	1,878	.....	67	1,945
312	214	126	36	...	15	600	860	.....	40	.....	.....	30	22	1,943	61	1,955	40	460	2,516	1,121	500	407	61	2,089
313	784	327	2,711	....	6	4,057	5,873	.....	.....	.....	2,500	88	240	16,586	288	721	.....	.....	1,009	.....	.....	500	177	677
314	401	759	903	....	56	1,334	3,381	102	.....	100	.....	6	73	7,115	763	726	.....	1,000	2,489	605	.....	.....	22	627
315	335	60	507	....	29	171	2,202	.....	.....	107	71	67	210	3,759	.....	3,200	.....	1,098	4,298	2,063	998	345	420	3,826
316	1,448	725	4,733	....	591	2,504	9,404	7,518	.....	7,191	.....	1,733	454	36,301	2,054	19,004	.....	34,030	55,088	5,881	36,587	3,160	2,749	48,377
317	824	332	3,827	....	58	4,933	4,947	11	.....	1,526	3,722	1,396	3,888	25,464	1,945	.....	.....	.....	1,945	.....	34,418	.....	....	34,418
318	713	197	1,709	400	22	1,948	3,682	536	.....	.....	1,100	13	164	10,484	1,785	1,179	.....	600	3,564	2,147	.....	.....	....	2,147
319	209	89	215	....	207	.....	1,155	.....	.....	.....	300	15	2	2,192	6	1,332	.....	161	1,499	913	.....	.....	34	947
320	684	222	2,026	....	...	3,168	4,073	1,242	.....	1,622	2,902	341	1,561	17,841	1,111	5,299	.....	1,394	7,804	3,127	6,559	.....	1,135	10,821
321	389	883	538	....	56	997	2,632	.....	63	.....	1,615	.....	690	7,863	.....	.....	4,526	.....	4,526	.....	.....	851	507	1,358
322	417	81	1,729	1,000	137	1,034	6,692	216	.....	.....	700	.....	229	12,235	3,330	.....	520	1,000	4,850	1,418	...	1,000	....	2,418
323	735	195	1,579	....	44	2,210	4,930	.....	.....	1,500	1,300	321	159	12,973	554	4,324	9,000	600	14,478	3,430	3,200	.....	...	6,630
324	769	253	1,367	....	56	.....	4,841	.....	.....	250	393	41	235	8,205	715	2,237	.....	2,514	5,466	1,566	500	.....	....	2,066
325	303	45	222	....	20	.....	1,318	.....	.....	.....	.....	.....	7	1,915	643	700	.....	.....	1,343	225	.....	.....	40	265
326	399	50	2	....	....	.....	490	.....	.....	.....	.....	24	3	968	175	1,781	.....	.....	1,956	.....	.....	300	...	300
327	601	176	2,136	....	312	1,106	3,532	.....	.....	.....	.....	.....	153	8,016	30	3,154	9,042	1,249	13,475	.....	.....	.....	....	....
328	631	209	578	225	34	....	478	.....	380	.....	762	638	253	4,188	589	4,166	1,485	761	7,001	.....	10,500	932	1,033	12,465
329	1,154	173	1,980	....	709	1,974	6,076	.....	658	265	.....	16	70	13,075	897	151	26,559	2,602	30,209	.....	.....	.....	....	....
330	1,263	459	2,799	....	65	3,693	9,336	.....	.....	325	.....	163	323	18,426	2,083	15,571	9,500	6,879	34,033	12,698	2,925	.....	19	15,642
331	566	227	1,878	....	10	2,653	2,960	.....	.....	.....	1,053	27	254	9,628	227	4,913	.....	.....	5,140	4,948	.....	.....	...	4,948
332	658	134	917	....	13	2,201	2,941	.....	.....	.....	261	....	136	7,261	560	3,840	.....	....	4,400	3,050	....	....	127	3,177
333	221	45	32	....	30	.....	637	.....	.....	.....	50	6	28	1,049	289	857	.....	35	1,181	630	.....	50	20	700
334	578	137	3,735	....	420	3,650	4,050	74	.....	.....	1,000	11	197	13,852	823	143	.....	4	970	....	....	.....	814	814

No.	Township Municipalities and Counties in which located.	Population, 1900.	No. of acres assessed, 1900.	Assessed value of real and personal property and income taxable, 1900.	Taxes imposed for all purposes, 1900.			Receipts, 1899.								
					Total.	Per head.	Mills on $	Balance from 1898.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	$		$	$	$	$	$	$	$	$	$
335	Nissouri W., Middlesex	2,700	49,500	1,460,950	14,920	5 53	10.2	4,689	11,544	71	.....	.....	4,700	.....	61	21,065
336	Normanby, Grey	4,412	63,144	1,475,135	14,244	3 23	9.7	1,090	13,349	262	.....	.....	.....	.....	456	15,157
337	Norwich N., Oxford	2,207	33,864	1,515,350	12,001	5 44	7.9	1,585	11,200	10	.....	12	2,000	.....	201	15,008
338	Norwich S., Oxford	2,317	35,661	1,003,976	9,879	4 26	9.8	2,093	9,686	86	.....	22	.....	756	1,449	14,092
339	Nottawasaga, Simcoe	5,399	90,048	2,073,855	19,318	3 58	9.3	685	27,255	269	.....	.....	1,500	.....	1,283	30,892
340	Oakland, Brant	685	10,364	335,780	3,372	4 92	8.5	446	3,214	17	.....	128	.....	.....	10	3,815
341	Oakley, Muskoka	326	22,544	38,195	1,021	3 13	26.7	40	979	4	.....	.....	.....	.....	14	1,037
342	Olden, Frontenac	976	51,569	109,779	4,119	4 22	37.5	715	4,156	5	.....	.....	.....	.....	.....	4,876
343	Oliver, Thunder Bay	405	38,561	109,324	1,972	4 87	18 0	686	1,032	73	.....	.....	.....	.....	82	1,873
344	Oneida, Haldimand	1,466	32,577	948,810	6,844	4 67	7.2	2,090	7,967	.....	.....	.....	800	.....	6	10,863
345	Onondaga, Brant	1,168	20,564	704,301	5,072	4 58	7.2	951	5,017	59	.....	.....	.....	.....	77	6,104
346	Ops, Victoria	2,171	56,885	1,560,450	14,120	6 50	9.0	7,963	13,432	.....	.....	76	.....	.....	169	21,640
347	Orford, Kent	2,764	49,605	1,430,280	15,749	5 70	11.0	971	17,206	94	.....	.....	5,500	2,250	19	26,040
348	Orillia, Simcoe	3,468	72,701	580,181	11,927	3 47	20.6	1,271	10,084	24	.....	.....	2,500	750	359	14,988
349	Oro, Simcoe	3,893	73,227	1,062,675	10,539	2 71	9.9	1,904	12,222	114	.....	53	.....	.....	349	14,642
350	Osgoode, Carleton	4,699	91,170	1,524,825	16 976	3 61	11.1	2,015	14,791	1,064	211	31	1,000	.....	110	19,222
351	Osnabruck, Stormont	4,721	62,042	1,192,980	15,933	3 37	13.4	1,013	16,322	232	.....	.....	.....	.....	1,305	18,872
352	Oso, Frontenac	969	42,411	91,688	3,540	3 65	38.6	5	3,461	119	.....	.....	.....	.....	176	3,761
353	Osprey, Grey	3,033	70,669	830,570	9,009	2 97	10.8	285	7,085	58	.....	.....	664	1,725	166	9,983
354	Otonabee, Peterborough	3,278	64,669	1,979,786	14,719	4 49	7.4	1,755	14,486	58	.....	7	.....	.....	.....	16,306
355	Oxford-on-Rideau, Grenville	2,735	59,058	787,535	9,557	3 49	12.1	1,400	10,059	100	.....	11	600	.....	19	12,189
356	Oxford E., Oxford	1,883	34,548	1,480,605	9,431	5 01	6.4	1,954	9,737	29	.....	34	500	.....	8	12,262
357	Oxford N., Oxford	1,242	21,130	877,222	7,106	5 72	8.1	946	5,190	180	.....	2	353	.....	119	6,790
358	Oxford W., Oxford	2,046	25,882	1,099,090	8,666	4 24	7.9	2,582	7,524	546	.....	51	.....	.....	275	10,978
359	Pakenham, Lanark	1,915	56,291	618,924	7,060	3 69	11.4	527	6,998	189	.....	.....	1,070	.....	30	8,805
360	Palmerston and Canonto, Frontenac	1,076	55,155	64,366	2,265	2 11	35.2	363	3,098	27	.....	.....	.....	.....	.....	3,488
361	Papineau Nipissing	593	23,834	57,575	842	1 42	14.6	25	620	.....	.....	.....	.....	.....	5	650
362	Peel, Wellington	3,854	74,244	1,839,410	17,637	4 58	9.3	498	18,158	236	.....	6	2,600	.....	249	21,747
363	Pelee Island, Essex	620	9,787	283,602	7,552	12 18	26.6	1,294	5,643	53	.....	.....	2,500	.....	.....	9,490
364	Pelham, Welland	2,333	28,927	1,008,415	9,311	3 99	9.2	1,778	7,921	1	3,622	1,282	833	.....	241	15,678
365	Pembroke, Renfrew	719	8,359	182,723	1,464	2 04	8.0	547	1,036	8	.....	.....	.....	.....	.....	1,591
366	Percy, Northumberland	2,998	51,488	969,900	11,212	3 74	11.6	86	11,088	230	.....	.....	2,515	1,100	51	15,070
367	Perry, Parry Sound	1,449	44,221	221,010	3,702	2 55	16.8	1,159	4,007	93	.....	.....	.....	.....	.....	5,259
368	Petewawa, Renfrew	947	28,572	43,999	1,778	1 88	40.4	17	1,551	15	.....	.....	.....	.....	2	1,585

No.	Disbursements, 1899.													Assets on December 31, 1899.					Liabilities on December 31, 1899.				
	Allowances, salaries and commission.	Other expenses of municipal government.	Roads and bridges.	Construction of buildings, waterworks, &c	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
335	987	185	5,533	....	49	4,837	4,966	54	....	.....	4,000	55	147	20,813	252	6,054	....	.....	6,306	4,489	.....	2,763	....	7,252
336	932	378	2,823	....	91	2,826	6,631	.....	.....	.....	.....	.....	399	14,080	1,077	8	.....	1,000	2,085	.....	.....	.....	.....	.....
337	640	171	3,591	....	31	2,663	3,551	482	.....	101	2,000	44	176	13,450	1,558	.....	.....	200	1,758	.....	.....	.....	1,081	1,081
338	437	237	2,481	....	5	1,966	4,373	1,756	.....	328	.....	65	216	11,894	2,198	55	127	2,500	4,880	.....	961	.....	.....	961
339	1,597	444	5,202	....	87	7,540	11,136	.....	.....	296	1,500	122	879	28,803	2,089	4,183	.....	.....	6,272	1,671	1,121	1,500	2,013	6,305
340	299	83	142	....	78	611	1,310	.....	.....	500	.....	250	50	3,323	492	24	4,544	.....	5,060	.....	4,500	.....	.....	4,500
341	206	47	274	....	35	.....	436	.....	.....	.....	.....	2	21	1,021	16	809	.....	.....	825	316	.....	.....	.....	316
342	387	87	370	....	86	1,442	2,221	.....	.....	.....	.....	.....	173	4,766	110	2,547	.....	1,000	3,657	2,511	.....	.....	39	2,550
343	243	59	244	....	10	.....	700	.....	71	.....	.....	100	25	1,452	421	2,070	1,455	1,100	5,046	.....	2,000	.....	.....	2,000
344	428	114	881	....	49	3,941	3,114	.....	.....	.....	800	20	87	9,434	1,429	110	...	1,000	2,539	.....	.....	.....	.....	.....
345	447	98	791	....	223	1,211	2,117	.....	14	.....	.....	.....	171	5,072	1,032	130	14	3,000	4,176	.....	.....	.....	.....	.....
346	852	177	4,374	....	175	3,509	4,178	.....	.....	696	.....	173	266	14,400	7,240	157	.....	4,486	11,883	3,094	3,466	.....	.....	6,560
347	934	498	2,180	....	222	2,132	4,731	1,570	.....	1,487	5,632	674	2,828	22,888	3,152	6,907	.....	4,000	14,059	4,515	13,117	.....	1,060	18,692
348	938	537	2,345	....	64	1,555	6,091	.....	.....	821	2,000	297	224	14,872	116	3,949	.....	525	4,590	2,079	3,923	1,000	120	7,122
349	796	276	1,527	....	79	3,198	5,759	.....	.....	189	.....	24	8	11,856	2,786	4,037	.....	1,363	8,186	4,872	200	.....	50	5,122
350	860	900	2,070	....	55	3,847	7,253	446	618	1,096	711	443	50	18,349	873	.....	15,618	3,700	20,191	.....	7,836	515	150	8,501
351	542	303	3,261	725	242	.....	8,413	409	.....	1,603	.....	1,133	1,058	17,689	1,183	2,702	.....	3,194	7,079	2,080	18,282	.....	1,600	21,962
352	324	96	467	....	38	429	2,094	.....	.....	51	.....	12	238	3,749	12	1,315	.....	500	1,827	1,170	149	.....	86	1,405
353	727	272	1,273	....	121	1,619	5,593	.....	.....	.....	295	.....	83	9,983	.....	4,858	.....	.....	4,858	2,777	1,725	369	546	5,417
354	535	163	2,649	....	383	4,429	5,144	.....	.....	56	.....	16	23	13,398	2,908	4,477	.....	3,500	10,885	4,479	.....	.....	392	4,871
355	714	83	487	....	30	2,017	4,988	26	1,841	.....	600	60	511	11,357	832	313	2,225	6,000	9,370	2,104	832	11	.....	2,947
356	538	62	3,237	....	....	2,725	3,546	191	.....	....	500	5	97	10,901	1,361	1,331	.....	605	3,297	5	.....	.....	.....	5
357	500	116	1,704	....	7	1,585	2,268	514	17	.....	.....	.....	79	6,790	.....	883	17	275	1,125	.....	.....	353	240	593
358	652	74	2,658	28	42	1,976	3,290	1,313	.....	.....	.....	.....	52	10,085	893	574	.....	1,681	3,148	.....	.....	.....	5	5
359	438	168	1,690	....	94	1,160	2,965	.....	.....	400	1,070	185	187	8,357	448	655	.....	3,800	4,903	.....	2,800	.....	144	2,944
360	390	78	283	....	15	855	1,145	.....	.....	200	.....	91	167	3,224	264	489	.....	100	853	9	1,600	.....	21	1,630
361	155	23	7	....	....	.....	351	.....	.....	.....	62	.....	39	637	13	641	.....	.....	654	574	.....	43	11	428
362	891	122	3,357	....	73	6,712	6,731	.....	.....	330	2,600	292	209	21,317	430	22	.....	5	457	.....	4,334	.....	98	4,432
363	402	156	914	....	....	.....	1,303	3,116	.....	1,358	500	1,349	182	9,280	210	7,743	.....	33,370	41,323	1,127	20,328	4,300	955	26,710
364	608	178	1,060	....	15	3,908	4,568	.....	4,047	.....	250	7	124	14,765	913	959	18,000	5,493	25,365	.....	.....	1,657	6	1,663
365	207	76	70	....	....	244	934	.....	.....	.....	.....	.....	28	1,559	32	1,152	.....	175	1,359	657	.....	.....	53	710
366	532	257	3,420	....	49	1,628	6,872	.....	.....	509	1,400	104	299	15,070	.....	816	.....	9,375	10,191	.....	975	1,132	.....	2,107
367	267	115	394	....	91	.....	2,585	.....	.....	291	.....	151	99	3,993	1,266	2,307	.....	65	3,638	1,651	2,244	.....	100	3,995
368	342	18	28	....	....	51	815	.....	.....	160	.....	24	2	1,440	145	523	.....	318	986	251	318	.....	.....	569

No.	Township Municipalities and Counties in which located.	Population, 1900.	No. of acres assessed, 1900.	Assessed value of real and personal property and income taxable, 1900.	Taxes imposed for all purposes, 1900.			Receipts, 1899.								
					Total.	Per head.	Mills on $.	Balance from 1898.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	$ c.		$	$	$	$	$	$	$	$	$
369	Pickering, Ontario	5,338	71,375	3,383,604	25,814	4 84	7.6	.....	23,328	345	1,000	185	13,226	.....	69	38,153
370	Pilkington, Wellington	1,396	29,122	1,043,306	7,750	5 55	7.4	74	8,090	30	.....	.....	550	.....	94	8,838
371	Pittsburg, Frontenac	2,106	48,156	810,663	12,860	6 11	15.9	5,238	12,494	132	.....	61	.....	.....	76	18,001
372	Plantagenet N., Prescott	3,774	50,521	406,650	10,160	2 69	25.0	921	11,055	329	.....	.....	.....	.....	159	12,464
373	Plantagenet S., Prescott	3,312	48,769	391,566	8,979	2 71	22.9	170	7,386	181	.....	.....	300	265	20	8,262
374	Plummer Additional, Algoma	617	16,681	99,180	1,741	2 69	17.6	197	2,617	203	.....	.....	200	.....	.....	3,217
375	Plympton, Lambton	3,342	75,015	2,047,555	21,021	6 29	10.3	1,681	18,319	99	.....	.....	2,000	2,818	275	25,192
376	Portland, Frontenac	2,147	52,958	462,308	8,509	3 96	18.4	.....	9,318	87	1,000	99	.....	.....	5	10,509
377	Prince, Algoma	163	15,264	40,029	628	3 85	15.7	3	525	.....	.....	.....	.....	.....	.....	528
378	Proton, Grey	2,978	80,107	833,175	9,870	3 31	11.8	2,064	9,251	79	166	15	.....	.....	264	11,839
379	Puslinch, Wellington	3,321	58,506	1,440,645	11,023	3 32	7.7	1,047	12,086	163	4,820	501	.....	.....	59	18,676
380	Radcliffe and Raglan, Renfrew	945	40,171	78,335	2,233	2 36	28.5	57	2,073	62	.....	.....	75	.....	28	2,296
381	Raynham, Haldimand	1,639	25,659	543,200	6,349	3 87	11.7	1,101	5,660	102	250	226	.....	.....	95	7,434
382	Raleigh, Kent	4,499	71,369	2,494,321	33,243	7 39	13.3	1,027	32,526	35	.....	233	6,183	9,593	695	50,292
383	Rama, Ontario	1,189	33,708	148,875	3,393	2 85	22.8	212	3,735	22	1,722	124	600	.....	143	6,558
384	Ramsay, Lanark	2,084	61,408	680,750	9,926	4 76	14.6	2,964	8,596	174	.....	344	2,000	.....	34	14,112
385	Ratter and Dunnett, Nipissing	690	20,527	62,500	2,500	3 62	40.0	374	1,601	219	.....	.....	.....	1,000	11	3,205
386	Rawdon Hastings	3,143	66,129	1,180,220	12,772	4 06	10.8	.....	13,553	50	.....	.....	378	.....	338	14,319
387	Rayside, Algoma	747	19,134	60,681	1,957	2 62	32.3	21	1,661	36	.....	.....	287	.....	94	2,099
388	Reach, Ontario	3,481	63,518	1,973,924	12,851	3 69	6.5	142	13,402	70	.....	.....	3,900	.....	169	17,683
389	Richmond, Lennox and Addington	2,176	49,831	860,985	10,535	4 84	12.2	.....	11,694	32	1,728	961	983	.....	.....	15,398
390	Rochester, Essex	2,550	32,392	948,205	11,189	4 39	11.8	796	11,078	109	.....	.....	.....	5,578	381	17,942
391	Rolph, Buchanan and Wylie, Renfrew	1,036	40,625	57,141	2,040	1 97	35.7	115	1,896	29	7	.....	.....	1,400	.....	3,447
392	Romney, Kent	1,850	26,397	746,813	17,426	9 42	23.3	3,041	13,038	.....	.....	60	2,000	.....	890	19,029
393	Ross, Renfrew	2,801	52,146	632,600	6,050	2 16	9.6	866	5,284	293	.....	.....	.....	.....	4	6,397
394	Roxborough, Stormont	4,197	71,515	769,870	16,901	4 03	22.0	451	13,284	369	1,093	.....	918	11,882	293	28,290
395	Russell, Russell	3,104	47,175	663,306	11,742	3 78	17.7	252	11,933	246	.....	4	.....	.....	25	12,460
396	Ryde, Muskoka	565	22,447	45,442	1,148	2 03	25.3	199	991	.....	.....	.....	.....	.....	30	1,220
397	Ryerson, Parry Sound	731	41,888	132,877	1,868	2 56	14.1	324	1,756	.....	.....	.....	.....	.....	.....	2,080
398	St. Joseph, Algoma	1,008	28,078	111,719	2,890	2 87	25.9	109	2,229	68	.....	.....	.....	.....	81	2,487
399	St. Vincent, Grey	2,811	63,340	1,389,320	12,419	4 42	8.9	3,625	11,704	.....	.....	.....	800	1,350	371	17,850
400	Salter, May and Harrow, Algoma	766	32,807	107,138	1,985	2 59	18.5	194	2,640	50	.....	.....	.....	.....	144	3,028
401	Saltfleet, Wentworth	3,038	28,290	1,775,737	14,396	4 74	8.2	2,063	13,638	136	68	302	2,983	.....	420	19,610
402	Sandfield, Manitoulin	250	13,506	31,676	452	1 80	14.3	.....	974	.....	.....	.....	.....	.....	104	1,078

TOWNSHIP MUNICIPALITIES, 1899-1900.—*Continued.*

No.	Disbursements, 1899.													Assets on December 31, 1899.					Liabilities on December 31, 1899.				
	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Construction of buildings, waterworks, &c	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
369	1,510	416	4,410	....	860	4,925	9,657	.....	.....	1,247	14,038	677	413	38,153	...	2,277	...	4,652	6,929	1,100	8,852	226	150	10,328
370	506	133	1,468	....	15	2,553	3,500	.....	.....	.....	200	56	145	8,576	262	3,969	.....	.....	4,231	2,856	.....	1,240	....	4,096
371	694	201	1,639	....	35	5,124	4,595	.....	.....	.....	.....	.....	102	12,390	5,611	2,227	.....	2,178	10,016	5,219	.....	.....	179	5,398
372	886	144	1,312	....	60	1,320	6,970	.....	.....	850	.....	244	645	12,231	233	5,949	.....	2,525	8,707	2,792	2,539	.....	525	5,856
373	706	132	1,437	....	5	901	3,632	323	.....	246	425	70	324	8,201	61	5,530	.....	950	6,541	4,730	205	500	590	6,025
374	180	41	90	....	130	.....	1,097	.....	.....	.....	.....	.....	.....	1,998	1,219	166	.....	250	1,635	829	.....	.....	96	925
375	856	503	3,691	....	412	1,554	6,866	3,100	.....	3,682	2,000	884	380	23,922	1,270	5,089	.....	16,137	22,496	2,988	15,737	.....	321	19,046
376	536	181	1,088	....	179	3,713	3,208	.....	.....	.....	522	.....	13	9,440	1,069	3,202	4,250	500	9,021	3,691	.....	.....	.....	3,691
377	57	15	118	....	....	.....	65	.....	.....	.....	100	.....	5	360	168	.....	.....	.....	168	.....	.....	100	.....	100
378	652	197	1,561	....	137	1,793	5,079	.....	196	1,082	.....	133	142	10,972	867	2,285	1,205	233	4,590	336	5,189	181	.....	5,706
379	808	189	1,474	....	60	5,302	5,506	.....	4,771	.....	.....	.....	225	18,335	341	1,929	10,108	3,000	15,378	575	.....	.....	95	670
380	303	42	167	....	....	201	1,389	.....	.....	.....	75	.....	90	2,267	28	2,436	.....	.....	2,464	1,473	.....	.....	.....	1,473
381	378	141	716	....	87	1,991	2,868	.....	250	.....	.....	.....	66	6,497	937	.....	4,640	500	6,077	.....	.....	.....	.....	.....
382	1,145	2,913	2,338	....	462	4,314	6,983	17,807	.....	8,914	.....	4,918	498	50,292	.....	18,695	.....	89,939	108,634	.....	104,867	6,183	3,454	114,504
383	522	117	464	38	27	195	1,832	126	375	1,700	824	234	18	6,472	86	1,671	2,720	743	5,220	627	3,000	625	190	4,442
384	707	1,097	4,964	....	53	1,721	4,460	.....	.....	.....	.....	.....	53	13,055	1,057	32	7,660	600	9,349	350	.....	2,000	.....	2,350
385	183	438	399	....	....	.....	2,141	.....	.....	20	.....	12	9	3,202	...	838	.....	1,255	2,096	363	1,180	.....	.....	1,543
386	686	245	626	....	357	4,453	5,938	.....	.....	371	511	190	64	13,441	878	5,174	.....	2,652	8,704	4,597	1,400	.....	50	6,047
387	372	44	139	....	....	.....	979	82	.....	.....	208	..	275	2,099	.....	1,283	.....	600	1,883	800	.....	408	280	1,488
388	1,276	445	1,736	....	802	2,430	6,358	.....	.....	4,278	121	236	17,682	1	1,941	.....	1,793	3,735	.....	.....	1,887	100	1,987	
389	556	88	1,658	....	208	4,036	4,914	.....	1,798	.....	1,840	186	114	15,398	.....	4,718	17,691	2,300	24,709	2,109	.....	2,483	2	4,594
390	649	160	1,627	....	201	1,649	4,759	5,516	.....	1,505	.....	331	499	16,896	1,046	9,639	.....	.....	10,685	4,463	11,698	.....	1,241	17,402
391	183	70	22	....	5	230	1,398	.....	1,307	80	.....	4	142	3,441	6	2,053	1,307	1,607	4,973	1,428	1,400	.....	318	3,146
392	696	315	1,640	195	92	1,044	3,713	2,954	.....	4,943	.....	2,625	64	18,281	748	12,622	.....	8,000	21,370	1,950	45,407	2,005	785	50,147
393	351	198	969	....	9	914	3,296	237	.....	100	.....	36	59	6,169	228	997	.....	1,700	2,925	714	500	.....	.....	1,214
394	663	961	1,980	....	119	1,146	6,701	12,791	.....	2,241	.....	1,356	332	28,290	.....	7,952	802	2,790	11,544	2,558	42,211	934	320	46,023
395	888	456	1,426	....	....	1,140	6,196	138	338	420	500	564	372	12,438	22	7,122	672	1,000	8,816	3,119	11,639	.....	566	15,324
396	192	66	110	....	12	.....	607	.....	.....	35	.....	18	6	1,046	174	1,010	.....	2,275	3,459	..	265	... ..	200	465
397	198	91	84	....	....	....	1,103	.....	.....	169	.....	52	63	1,760	320	2,516	.....	.....	2,836	1,177	537	.....	245	1,959
398	268	115	644	....	....	....	975	.....	.....	55	.....	33	145	2,235	252	1,784	.....	647	2,683	710	418	.....	170	1,298
399	794	292	1,884	....	455	2,420	7,028	.....	.....	.....	800	15	81	13,769	4,081	322	.....	1,402	5,805	2,556	1,350	... ..	306	4,212
400	253	39	167	....	5	.....	1,411	.....	108	.....	100	112	150	2,345	683	964	486	2,905	5,038	850	2,100	50	....	3,000
401	990	1,005	3,866	....	310	2,829	4,852	611	664	.....	2,983	198	390	18,698	912	1,265	6,688	269	9,134	2,532	2,000	... ..	.. ..	4,532
402	101	12	27	....	24	.....	200	.....	.....	.....	.....	... ..	39	403	675	338	.....	.....	1,013	.....	.....	64	.....	64

No.	Township Municipalities and County in which located.	Population, 1900.	No. of acres assessed, 1900.	Assessed value of real and personal property and income taxable, 1900.	Taxes imposed for all purposes, 1900.			Receipts, 1899.								
					Total.	Per head.	Mills on $	Balance from 1898.	Municipal and school taxes.	License fees, rents, fines, etc.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total Receipts.
				$	$	$		$	$	$	$	$	$	$	$	$
403	Sandwich E., Essex	2,238	18,717	628,895	13,448	6 01	21.4	534	12,997	504	.....	19	3,710	5,028	876	23,668
404	Sandwich S., Essex	1,633	23,532	588,618	10,691	6 55	18.2	94	10,211	50	.....	.....	1,800	2,574	17	14,746
405	Sandwich W., Essex	2,476	23,338	687,406	13,440	5 43	19 6	4	12,466	373	.....	.....	200	2,257	15	15,315
406	Sarawak, Grey	1,251	10,922	253,979	4,476	3 58	17.6	785	4,707	.....	1,454	16	440	1,350	47	8,799
407	Sarnia, Lambton	2,064	38,347	775,029	16,343	7 92	21.1	350	15,105	63	.....	18	1,547	954	387	18,424
408	Saugeen, Bruce	1,391	36,059	840,270	5,676	4 08	6.8	772	5,084	36	.....	7	.....	.....	72	5,971
409	Sault Ste. Marie, Algoma	726	46,718	356,632	7,363	10 14	20.6	1,082	7,222	79	.....	.....	.....	.....	31	8,414
410	Scarborough, York	3,711	42,875	2,087,757	16,840	4 54	8.1	1,322	16,580	436	3,023	539	.....	.....	58	21,958
411	Scott, Ontario	2,185	49,237	1,026,560	9,339	4 27	9 1	.....	8,419	54	.....	260	2,100	.....	.....	10,833
412	Scugog, Ontario	473	9,244	287,600	1,880	3 97	6.5	155	1,719	34	.....	.....	100	.....	8	2,016
413	Sebastopol, Renfrew	729	30,052	54,491	1,137	1 56	20.9	82	1,298	17	.....	.....	.....	.....	22	1,419
414	Seneca, Haldimand	1,815	41,746	884,900	8,296	4 57	9.4	1,263	8,265	136	.....	23	.....	.....	1	9,688
415	Seymour, Northumberland	2,945	66,920	1,125,175	12,870	4 37	11.4	1,226	13,451	13	.....	.....	5,395	.....	840	20,925
416	Sheffield, Lennox and Addington	2,025	68,978	671,972	7,024	3 47	10 5	109	7,842	136	4,481	.....	.....	.....	.....	12,568
417	Sherbourne, McClintock, etc, Haliburton	214	10,116	19,198	745	3 48	38.8	117	617	.....	788	.....	.....	.....	925	2,447
418	Sherbrooke, Haldimand	383	4,680	151,346	1,341	3 50	8.9	24	1,395	7	154	67	.....	.....	8	1,655
419	Sherbrooke S., Lanark	815	36,990	91,006	1,735	2 13	19.1	21	1,695	39	.....	.....	.....	.....	4	1,759
420	Shuniah, Thunder Bay	139	95 439	136,741	2,393	17 22	17.5	237	3,214	.....	.....	.....	254	.....	115	3,820
421	Sidney, Hastings	3,973	69,577	2,049,540	19,818	4 99	9.7	.....	18,042	103	.....	.....	1,107	.....	670	19,922
422	Smith, Peterborough	2,565	57,738	1,419,710	11,668	4 55	8.0	3,519	11,487	135	.....	91	.....	.....	37	15,269
423	Snowdon, Haliburton	726	33,016	69,451	3,249	4 48	4 68	59	2,802	.....	.....	.....	53	.....	467	3,381
424	Sombra, Lambton	3,749	72,017	1,012,120	21,632	5 77	21.4	2,586	22,711	275	.....	58	.....	2,988	498	29,116
425	Somerville, Victoria	1,843	62,887	202,545	5,815	3 16	28.7	128	5,701	57	376	194	.....	.....	302	6,758
426	Sophiasburg, Prince Edward	1,854	43,318	989,634	7,202	3 90	7.3	164	7,251	55	.....	100	500	.....	5	8,075
427	Southwold, Elgin	3,703	72,575	2,493,528	23,727	6 41	9.5	6,221	23,838	183	.....	46	1,991	1,425	1,281	34,985
428	Springer, Nipissing	885	30,312	65,033	1,909	2 16	29.4	82	2,685	.....	.....	.....	.....	.....	350	3,117
429	Stafford, Renfrew	1,073	21,318	75,435	2,605	2 43	34.5	593	1,919	.....	.....	.....	254	.....	.....	2,766
430	Stamford, Welland	1,958	21,241	805,956	9,995	5 10	12.4	227	10,382	238	.....	14	800	.....	198	11,859
431	Stanhope, Haliburton	486	15,704	24,501	1,251	2 57	51.1	5	1,413	.....	.....	.....	300	300	128	2,146
432	Stanley, Huron	2,146	43,313	1,665,755	9,477	4 42	5.7	350	9,891	105	2,000	13	.....	.....	3	12,362
433	Stephen, Huron	4,098	56,771	1,802,405	14,308	3 49	8.0	1,139	15,399	410	.....	.....	3,400	1,000	455	21,803
434	Stephenson, Muskoka	1,039	43,282	136,657	3,171	3 05	23.2	.....	2,948	105	250	12	216	.....	55	3,586
435	Stisted, Muskoka	616	40,691	106,022	1,886	3 06	17.8	416	1,819	8	.....	.....	.....	.....	.....	2,243
436	Storrington, Frontenac	1,726	56,005	417,705	8,593	4 98	20.6	152	8,222	21	.....	.....	100	.....	10	8,505

No.	Disbursements, 1899.													Assets on December 31, 1899.				Liabilities on December 31, 1899.				
	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Construction of buildings, waterworks, &c.	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
403	872	231	2,267	....	270	1,231	3,962	5,287	.....	3,110	4,000	1,051	1,384	23,665	3	13,698	.....	13,795	27,496	5,093	17,383	3,767	1,547	27,790
404	572	356	808	....	85	937	2,213	3,057	.....	3,761	1,000	732	846	14,367	379	10,838	.....	7,876	19,093	3,301	12,880	1,800	1,590	19,571
405	776	211	2,452	..	36	1,410	5,262	2.365	.....	1,958	.....	421	327	15,218	97	12,961	.....	1,659	14,717	6,390	8,421	200	2,574	17,585
406	443	283	1,045	....	49	407	3,189	....	1,599	.....	440	340	49	7,844	955	858	1,677	1,436	4,926	.....	8,850	240	55	9,145
407	929	629	2,712	....	338	1,244	3,318	2,694	.....	4,927	.....	1,499	134	18,424	.....	1,602	.....	18,791	20,393	.....	28,938	1,547	.. ..	30,480
408	524	128	862	....	..	1,310	1,995	.....	.....	233	.....	38	70	5,160	811	13	.....	553	1,377	.....	497	.....	52	549
409	762	546	2,650	....	79	....	2,204	.....	.....	.....	500	.....	211	6,752	1,662	8,309	.....	3,022	12,993	2,071	.....	.....	297	2,368
410	1,140	305	5,337	....	69	4,249	6,589	.....	3,000	169	....	316	319	21,493	465	1,329	13, 142	6,470	21,406	.....	5,570	.....	.. ..	5,570
411	680	175	1,392	....	374	1,466	3,795	.....	.....	.....	.....	.....	89	10,398	435	29	4,761	.....	5,225	.....	785	.....	.....	785
412	164	83	133	.....	.....	351	941	16	.....	.....	100	4	10	1,802	214	41	.....	1,500	1,755	.....	.....	.....	141	141
413	194	25	48	....	6	158	905	.....	.....	.....	.....	.....	5	1,341	78	521	.....	19	618	463	.....	.....	.....	463
414	487	104	1,342	....	251	2,446	3,678	.....	.....	.....	.....	.....	102	8,410	1,278	...	.....	1,300	2,578	.....	.....	.....	.....	.....
415	779	385	5,420	....	268	1,827	4,574	.....	.....	.....	5,735	185	405	19,578	1,347	374	.....	50	1,771	.....	.....	1,920	292	2,212
416	586	323	536	....	125	1,933	2,976	.....	4,339	.....	.....	1,099	27	12,444	124	4,539	8,470	2,000	15,133	3,079	15,000	2,295	637	21,011
417	212	52	783	....	5	22	378	.....	601	.....	.....	.....	78	2,131	316	450	468	332	1,566	235	.....	.....	25	260
418	134	45	93	....	43	333	654	.....	131	.....	.....	.....	75	1,508	147	406	1,890	600	3,043	.....	.....	.....	.....	...
419	256	57	175	....	9	209	555	.....	.....	.....	.....	.....	79	1,340	419	515	.....	.....	934	554	.....	.....	136	690
420	907	253	323	.....	.....	.....	.....	.....	254	.....	.....	563	.....	2,300	1,520	7,488	1,720	4,524	15,252	.....	7,500	1,720	1,100	10,320
421	820	402	927	....	725	8,495	6,257	.....	.....	193	1,468	264	358	19,909	13	11,258	.....	1,912	13,183	9,429	912	307	.....	10,648
422	525	115	2,693	....	235	6,853	4,108	.....	.....	.....	.....	.....	93	14,622	647	2,599	.....	238	3,484	33	.....	.....	35	68
423	248	86	237	....	36	382	1,802	.....	.....	144	.....	29	417	3,381	.....	2,589	.....	666	3,255	3,125	416	53	174	3,768
424	1,071	631	2,913	....	464	1,545	6,780	2,328	1	9,702	.....	2,635	334	28,404	712	22,013	250	33, 679	56,654	5,820	39, 467	.....	.....	45,287
425	478	108	659	....	237	565	2,679	.....	1,072	.....	.....	500	351	6,649	109	5,703	5,225	400	11,437	2,406	10, 000	.....	143	12,549
426	482	265	469	....	128	2,313	3,700	.....	.....	.....	500	16	39	7,912	163	308	3,416	3,500	7,387	...	.....	.....	191	191
427	1,907	561	5,480	....	18	5,730	7,800	656	.....	1,743	1,991	334	486	26,706	8,279	2,697	.....	2,991	13,967	7,416	6,523	.....	908	14,847
428	338	77	269	....	19	...	1,080	.....	.....	385	512	259	134	3,073	44	5,261	.....	1,681	6,986	.....	4,495	.....	681	5,176
429	187	19	189	264	....	516	1,435	.....	.....	.....	.....	.....	30	2,630	136	952	.....	254	1,342	533	.....	254	139	926
430	529	333	1,879	...	59	2,028	4,745	.....	....	324	.....	338	529	10,764	1,095	3,156	.....	10, 227	14,478	2,580	6,030	803	.....	9,413
431	80	168	102	....	5	134	1,122	.....	.....	145	.....	25	302	2,083	63	1,231	.....	420	1,714	575	300	318	275	1,468
432	669	236	2,252	....	15	2,063	4,543	.....	2,000	.....	.....	.....	97	11,875	487	22	1,000	1,240	2,749	.....	.....	.....	.....	.....
433	799	242	3,194	725	66	2,139	6,173	.....	293	1,790	3,400	540	653	20,014	1,789	526	293	4,421	7,029	2,188	8,236	.....	.....	10,424
434	287	115	463	....	68	...	1,161	.....	328	250	573	99	38	3,382	204	1,807	1,252	1,938	5,201	1,121	2,090	570	192	3,973
435	253	39	253	....	18	.....	1,353	.....	90	.....	.....	43	23	2,172	71	240	390	1,568	2,269	.....	810	.....	.....	810
436	395	232	580	....	....	3,789	3,180	.....	.....	.....	100	.....	99	8,375	130	962	.....	1,000	2,092	533	.....	.....	.....	533

TOWNSHIP MUNICIPALITIES, 1899-1900.—*Continued.*

No.	Township Municipalities and Counties in which located.	Population, 1900.	No. of acres assessed, 1900.	Assessed values of real and personal property and income taxable, 1900.	Taxes imposed for all purposes, 1900.			Receipts, 1899.								
					Total.	Per head.	Mills on $	Balance from 1898.	Municipal and school taxes.	License fees, rents, fines, etc.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
437	Strong, Parry Sound	708	38,506	$ 132,175	$ 1,912	$ 2 70	14 5	$ 173	$ 1,505	$ 1	$	$	$ 150	$	$ 14	$ 1,843
438	Sullivan, Grey	3,299	73,630	1,168,925	10,646	3 23	9 1	231	10,834	29			1,400		189	12,683
439	Sunnidale, Simcoe	2,217	54,945	836,584	7,841	3 54	9·4	1,894	8,225	197			2,000	1,100	331	13,747
440	Sydenham, Grey	3,400	73,207	1,192,800	13,086	3 85	11.0		12,045	65			356		179	12,645
441	Tay, Simcoe	4,215	45,529	574,533	10,275	2 44	17.9	1,164	11,642	51		109		550	171	13,587
442	Tecumseth, Simcoe	3,221	65,965	1,683,785	15,720	4 88	9.3	3,754	18,301	117	2,083	37	1,500	8,000	693	34,485
443	Tehkummah, Manitoulin	440	19,631	53,000	1,064	2 42	20.1	127	729						5	861
444	Thessalon, Algoma	526	18,342	56,071	1,483	2 82	26.4	570	1,398							1,968
445	Thorah, Ontario	1,316	32,059	536,218	4,998	3 80	9.3		5,061	31	426	1,535	408		60	7,521
446	Thorold, Welland	1,679	22,851	632,116	6,661	3 97	10.5	459	6,955	49			1,473			8,936
447	Thurlow, Hastings	4,194	53,458	1,920,400	17,512	4 18	9 1	1,766	17,003	130					671	19,570
448	Tilbury E., Kent	3,329	54,711	1,510,725	30,182	9 07	20.0	1,718	26,986			21	19,203	11,308	2,416	61,652
449	Tilbury N., Essex	2,048	26,743	646,710	11,663	5 69	18.0	252	11,637	100		26	3,500	2,841	3,804	22,160
450	Tilbury W., Essex	2,160	22,955	636,125	16,096	7 45	25.3	2,685	14,898	348			2,970	3,808	897	25,606
451	Tiny, Simcoe	3,748	78,048	973,223	11,748	3 13	12.1	522	13,433	23			1,000		451	15,429
452	Torbolton, Carleton	860	29,067	143,700	3,118	3 63	21.7		4,066							4,066
453	Toronto, Peel	5,087	64,393	2,718,045	19,779	3 89	7.3	3,048	20,700	351	4,442	1,163	3,000		48	32,752
454	Toronto Gore, Peel	970	19,000	734,010	5,418	5 59	7.4	295	5,655	27	36	78	830		147	7,068
455	Tossorontio, Simcoe	1,615	44,597	738,823	6,115	3 79	8.3	1,719	7,666	150	500	2	700		304	11,041
456	Townsend, Norfolk	3,675	64,954	2,374,500	17,416	4 74	7.3		15,901	8			6,041		867	22,817
457	Trafalgar, Halton	3,405	66,984	2,464,304	15,428	4 53	6.3	200	15,483	96	6,732	2,467	6,500		82	31,550
458	Tuckersmith, Huron	2,457	40,738	1,961,835	10,764	4 38	5 5	2,147	11,042		170	683		2,942	40	17,024
459	Tudor and Cashel, Hastings	843	59,952	67,008	2,576	3 06	38.4	559	2,443	49					298	3,349
460	Turnberry, Huron	2,161	35,638	1,232,780	7,482	3 46	6.1	1,498	6,632	42		7	1,000		13	9,192
461	Tyendinaga, Hastings	3,734	77,048	1,416,210	16,651	4 46	11.8	501	16,326	158				600	571	18,156
462	Usborne, Huron	2,326	42,678	1,809,575	11,116	4 78	6.1	2,877	10,204	34			200		80	13,395
463	Uxbridge, Ontario	2,727	51,719	993,895	10,593	3 88	10.7	565	10,814	115		231	1,100		82	12,907
464	Van Horne, Rainy River	302	8,840	36,345	924	3 06	25.4		446	57			200			703
465	Vaughan, York	4,342	67,192	2,913,595	22,008	5 07	7.6	13,003	21,727	421	2,105	1,264			497	39,017
466	Verulam, Victoria	1,794	55,510	521,565	7,979	4 45	15.3	3,138	8,783			40		900	4	12,865
467	Vespra, Simcoe	2,996	62,060	489,240	9,829	3 28	20.1	199	10,269	12		39		1,220	172	11,911
468	Wainfleet, Welland	2,675	51,600	873,200	10,729	4 01	12.3	410	11,631	2		1,250		375	248	13,916
469	Wallace, Perth	2,779	49,873	1,953,661	14,101	5 07	7 2	31	11,092	65	4,250	74	1,100		352	16,964
470	Walpole, Haldimand	4,186	6,652	1,949,860	19,687	4 70	10.1	650	19,842	130		19	3,667		14	24,322

No.	Disbursements, 1899.													Assets on December 31, 1899.				Liabilities on December 31, 1899.			
	Allowances, salaries and commission.	Other expenses of municipal government.	Roads and bridges.	Construction of buildings, waterworks, &c	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
437	198	34	340	....	32	....	1,123	....	.....	.....	.....	.....	95	1,822	21	2,020	.....	77	2,118	1,125	.. ...	150	.....	1,275
438	497	128	1,716	54	264	2,185	5,879	46	.....	150	1,400	73	221	12,613	70	59	....	2,250	2,379	.....	750	.....	.....	750
439	763	610	1,744	....	71	1,682	3,327	.....	.....	113	2,000	190	165	10,665	3,082	1,405	.....	750	5,237	3,146	3,673	.....	124	6,943
440	891	239	3,287	....	162	2,214	5,425	.....	.....	170	6	108	143	12,645	.....	.....	.....	500	500	....	727	356	.....	1,083
441	780	280	1,503	....	209	2,683	7,020	26	.....	.....	.....	.....	208	12,709	878	8,633	.....	75	9,586	2,248	550	.....	300	3,098
442	673	286	3,422	....	106	6,650	6,479	8.949	4,177	.....	1,500	40	50	32,332	2,153	52	2,094	8	4,307	.....	8,000	.....	.....	8,000
443	124	52	110	....	7	....	509	....	.....	.....	.....	.....	49	851	10	766	.....	.....	776	104	.....	.....	234	338
444	205	110	333	....	31	....	924	.....	.....	.....	.....	.....	.....	1,603	365	469	.....	200	1,034	.....	.....	.....	.....	.....
445	593	459	1,422	....	155	691	1,864	.....	.....	1,000	388	600	349	7,521	.....	375	52, 444	2,216	55,035	.....	9,000	408	.....	9,408
446	537	220	670	....	2	3,246	3,523	.....	.....	.....	500	14	150	8,862	74	3,556	.....	.....	3,630	2,262	.....	973	240	3,375
447	757	389	1,613	....	1,273	9,307	6,111	.....	.....	.....	.....	.....	93	19,543	27	7,308	.....	2,000	9,335	4,924	.....	.....	96	5,020
448	1,215	1,457	4,260	....	323	2,115	7,752	15,897	.....	8,352	10,050	5,885	4,015	61 321	331	30,806	.....	9,798	40,935	5,925	117,389	19,203	9,616	152,133
449	986	333	1,899	....	304	992	3,852	3,881	.....	1,306	3,500	947	1,829	19,829	2,331	8,707	.....	575	11,613	4,096	28,262	.....	1,987	34,345
450	667	463	1,437	....	389	945	3,265	8,916	.....	6,350	.....	2,101	1,078	25,606	.....	11,019	.....	10,248	21,267	1,086	42,180	2,970	.....	46,236
451	775	207	1,498	111	81	1,668	4,849	.....	.....	839	2,000	2,053	327	14,408	1,021	6,695	.....	8,375	16,091	2,542	48,755	1,000	.....	52,297
452	282	160	297	....	.....	462	2,233	.....	.....	.....	342	.....	67	3,843	223	1,955	.....	.....	2,178	907	.....	.....	147	1,054
453	1,125	807	5,273	....	265	5,560	7,841	.....	4,455	957	3,000	402	529	30,214	2,538	2,733	28,215	5,290	38,776	.....	4,000	3,000	.....	7,000
454	456	79	1,259	....	5	1,632	1,900	.....	6	487	830	77	126	6,857	211	31	3,506	1,440	5,188	.....	490	.....	.....	490
455	546	148	610	....	69	2,408	3,610	34	502	.....	1,600	95	234	9,856	1,185	118	2	150	1,455	.....	.....	729	.....	729
456	986	223	2,342	....	.....	5,687	7,146	.....	.....	178	5,833	198	224	22,817	.....	5,154	.....	.....	5,154	813	954	3,191	.....	4,958
457	979	494	6,155	....	233	4,972	7,108	.....	6,732	200	3,150	132	1,115	31,270	280	3,882	45,173	5,127	54,462	380	.....	5,700	120	6,200
458	639	89	1,999	....	33	2,164	5,461	2,575	300	387	.....	149	484	14,280	2,744	113	17,814	800	21,471	.....	5,982	.....	.....	5,982
459	338	41	567	....	9	178	1,424	.....	.....	.....	.....	.....	8	2,565	784	2,268	.....	.....	3,052	1,724	.....	.....	25	1,749
460	594	143	1,113	....	5	1,223	3,475	112	.....	.....	1,000	25	131	7 821	1,371	573	.....	165	2,109	1,250	.....	.....	.....	1,250
461	1,160	170	1,199	....	330	6,541	7,376	.....	.....	200	.....	38	43	17,057	1,099	1,847	.....	1,279	4,225	1,286	400	.....	1,178	2,864
462	623	151	3,475	....	....	2,216	4,251	.....	.....	.....	200	2	139	11,057	2,338	56	.....	425	2,819	2,266	.....	.....	.....	2,266
463	876	832	1,542	....	237	1,048	4,095	.....	1,091	200	1,100	1,219	400	12,640	267	1,050	5,690	1,909	8,916	.....	19,800	.....	.....	19,800
464	144	129	22	....	....	....	150	.....	.....	.....	.....	.....	9	454	249	309	.....	305	863	.....	.....	200	88	288
465	1,550	399	9,543	....	15	6,069	8,717	.....	2,105	.....	.....	.....	376	28,774	10,243	544	35,332	1,659	47,778	6,498	.....	.....	2,918	9,416
466	454	222	444	....	307	1,723	4,626	.....	188	.....	.....	93	151	8,208	4,657	.....	946	2,154	7,757	2,158	2,750	.....	46	4,954
467	798	212	1,671	....	52	1,725	4,702	1,422	.....	408	92	150	107	11,339	572	2,599	.....	2,371	5,542	2,628	2,019	.....	250	4,897
468	689	324	989	453	8	3,410	4,166	876	.....	1,686	500	404	132	13,637	279	2,799	25,000	8,848	36,926	1,360	5,832	.....	.....	7,192
469	702	146	1,544	....	41	2,560	4,373	155	3,888	.....	2,175	919	83	16,586	378	4,575	3,888	778	9,619	3,460	20,000	.....	60	23,520
470	860	284	4,395	....	881	5,149	8,368	.....	.....	500	3,236	224	430	24,322	.....	10	.....	600	610	.....	2,700	431	.....	3,131

No.	Township Municipalities and Counties in which located.	Population, 1900.	No. of acres assessed, 1900.	Assessed value of real and personal property and income taxable, 1900.	Taxes imposed for all purposes, 1900.			Receipts, 1899.							
					Total.	Per head.	Mills on $	Balance from 1898.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	$ c.		$	$	$	$	$	$	$	$	$
471	Walsingham N., Norfolk	2,240	40,244	555,920	8,954	4 00	16.1	144	7 210	15	.....	.....	.....	300	142	7,811
472	Walsingham S., Norfolk	1,724	53,920	692,523	9,935	5 76	14.3	459	10,210	18	.....	.....	392	.....	388	11,467
473	Warwick, Lambton	3,087	70,129	2,013,600	15,544	5 04	7.7	576	17,393	52	.....	.....	3,650	100	162	21,933
474	Waterloo, Waterloo	7,016	82,175	3,609,550	29,546	4 21	8.2	.....	28,380	390	2,040	1,843	1,751	.....	860	35,264
475	Watt, Muskoka	926	34,983	427,700	2,304	2 49	18.0	352	2,459	18	143	.....	.....	.....	59	3,031
476	Wawanosh E., Huron	1,941	41,734	1,427,960	6,649	3 43	4.7	1,463	6,916	29	.....	6	900	.....	120	9,434
477	Wawanosh W., Huron	2,055	41,696	1,123,500	7,889	3 84	7.0	425	5,867	29	.....	.....	515	77	23	6,936
478	Wellesley, Waterloo	4,908	66,059	2,148,330	21,583	4 40	10.0	58	16,965	494	2,050	794	1,600	.....	744	22,705
479	Westmeath, Renfrew	3,419	70,443	293,777	9,436	2 76	32.1	332	8 908	204	.....	.....	.....	800	45	10,289
480	Westminster, Middlesex	4,179	63,097	2,982,430	19,957	4 78	6.7	13,479	19,624	153	.....	191	.....	.....	596	34,043
481	Whitby E, Ontario	2,526	31,175	1,626,235	10,165	4 02	6.3	600	9,462	182	.....	160	1,700	.....	.....	12,104
482	Whitby, Ontario	2,064	30,735	1,494,045	11,363	5 51	7.6	651	10,115	68	.....	.....	1,250	.....	39	12,123
483	Whitchurch, York	3,505	60,116	1,617,885	11,832	3 38	7.3	1,073	11,488	28	354	447	1,000	.....	70	14,460
484	Widdifield, Nipissing	638	45,080	69,575	2,046	3 21	29.4	16	1,580	32	.....	.....	13	.....	.....	1,641
485	Wilberforce and Algona N., Renfrew	2,159	68,537	134,350	4,012	1 86	29.9	491	4,957	5	.....	.....	.....	.....	25	5,478
486	Williams E., Middlesex	1,464	38,603	1,230,810	10,402	7 11	8.5	1,047	13,193	58	.....	16	505	.....	112	14,931
487	Williams W., Middlesex	1,516	35,176	893,640	8,528	5 63	9.5	161	9,747	.....	.....	.....	3,500	.....	102	13,510
488	Williamsburg, Dundas	3,725	59,689	1,464,742	16,825	4 52	11.5	204	16,046	10	.....	.....	2,399	.....	25	18,684
489	Willoughby, Welland	931	18,798	416,700	3,952	4 24	9.5	235	4,583	119	.....	.....	.....	.....	50	4,987
490	Wilmot, Waterloo	5,126	60,809	2,593,350	19,868	3 88	7.7	2,689	19,553	516	.....	.....	950	.....	118	23,826
491	Winchester, Dundas	3,141	57,048	1,341,535	21,417	6 82	16.0	.....	19,675	.....	.....	.....	2,500	1,636	443	24,254
492	Windham, Norfolk	3,786	66,719	1,569,465	14,197	3 75	9.0	285	13,113	57	.....	.....	92	.....	52	13,599
493	Wolfe Island, Frontenac	1,606	30,768	595,400	8,308	5 17	14.0	45	8,556	62	.....	.....	.....	.....	43	8,706
494	Wolford, Grenville	1,694	46,428	936,754	6,379	3 77	6.8	130	6,865	31	.....	.....	1,200	.....	532	8,758
495	Wollaston, Hastings	722	52,391	64,105	2,219	3 07	34.6	91	1,879	1	.....	.....	.....	.....	286	2,257
496	Woodhouse, Norfolk	1,869	34,500	1,113,884	9,366	5 01	8.4	710	9,531	10	.....	.....	760	.....	82	11,093
497	Woolwich, Waterloo	4,336	53,539	2,561,695	19,362	4 47	7.6	3,689	21,302	200	9	490	.....	.....	468	26,158
498	Yarmouth, Elgin	4,720	69,595	2,682,087	28,625	5 94	10.4	1,121	28,154	169	.....	22	6,000	.....	137	35,603
499	Yonge and Escott Front, Leeds	2,191	54,902	715,615	12,214	5 57	17.1	90	11,256	163	.....	.....	632	.....	7	12,148
500	Yonge and Escott Rear, Leeds	1,025	27,334	399,410	5,972	5 83	15.0	19	6,901	122	.....	360	.....	.....	457	7,949
501	York, York	8,600	58,000	5,722,710	81,527	9 48	14 2	167	94,450	797	12,379	1,190	390	.....	1,312	110,685
502	Zone, Kent	1,197	25,167	699,520	6,430	5 37	10.7	1,365	7,515	10	.....	.....	1,350	2,100	461	12,801
503	Zorra E., Oxford	3,867	57,553	2,725,460	22,282	5 76	8.2	4,190	22,234	429	.....	91	2,500	1,320	161	30,925
504	Zorra W., Oxford	2,125	55,013	2,562,720	15,259	7 18	6 0	6,580	15,789	44	18	550	3,218	834	9	27,042

No.	Disbursements, 1899.													Assets on December 31, 1899.					Liabilities on December 31, 1899.				
	Allowances, salaries and commission.	Other expenses of municipal government.	Roads and bridges.	Construction of buildings, waterworks, &c	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrear.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
471	409	319	1,711	....	11	1,815	3,630	....	.....	.....	.....	3	180	7,478	333	5,694	.....	1,105	7,132	3,537	400	.....	3	3,940
472	469	289	1,212	....	42	1,823	3,591	....	.....	2,070	392	1,148	232	11,268	199	1,272	.....	1,500	2,971	1,244	20,739	.....	.....	21,983
473	636	652	4,346	....	77	4,137	6,124	329	.....	1,004	3,993	288	319	21,905	28	1,984	.....	645	2,657	204	5,660	840	216	6,920
474	1,610	786	4,500	....	149	4,911	14,351	...	2,069	3,053	2,050	1,033	752	35,264	.....	.....	36,928	4,214	41,142	.....	21,338	863	.....	22,201
475	239	48	192	....	15	...	1,597	....	148	100	144	66	18	2,567	464	809	471	3,700	5,444	611	1,000	.....	.....	1,611
476	515	129	947	....	9	1,424	3,522	....	.....	...	900	22	2	7,470	1,964	259	.....	.....	2,223	1,472	.....	.....	.....	1,472
477	459	162	1,604	5	45	800	2,860	236	...	35	515	17	151	6,889	47	2,130	.....	900	3,077	1,371	240	.....	145	1,756
478	957	313	4,725	....	16	3,541	7,384	....	3,080	166	1,950	209	420	22,701	4	4,476	13,306	.....	17,786	.....	4,294	1,151	2,153	7,598
479	377	180	1,290	....	53	1,781	5,609	....	.....	673	.....	178	139	10,280	9	.....	.....	3,781	3,790	.....	2,796	.....	.....	2,796
480	1,198	441	6,796	....	339	6,535	7,283	....	.....	300	.....	129	616	23,637	10,406	3,353	.....	1,700	15,459	6,047	1,700	.....	.....	7,747
481	812	238	2,352	....	268	1,783	4,623	....	.....	.....	1,700	28	54	11,858	246	49	3,200	1,544	5,039	.....	.....	.....	80	80
482	820	136	1,877	....	194	1,747	3,984	....	.....	1,317	1,250	345	167	11,836	287	314	64	608	1,273	35	5,152	.....	121	5,308
483	843	167	2,314	....	54	3,635	5,664	....	175	320	1,000	64	161	14,297	163	1,144	14,218	1,295	16,820	.....	960	.....	317	1,277
484	405	29	360	....	3	..	749	....	.....	.....	.....	.....	95	1,641	...	1,121	.....	350	1,471	522	.....	13	84	619
485	342	86	550	....	22	891	2,147	....	.....	.....	.....	.....	163	4,201	1,277	1,089	.....	182	2,558	1,343	.....	...	288	1,631
486	524	158	2,713	....	104	3,377	3,043	183	.. ..	...	505	8	547	11,162	3,769	462	.....	.....	4,231	3,127	.....	.....	200	3,327
487	630	97	3,175	....	90	2,447	3,115	79	.....	.....	2,750	84	58	12,525	985	5,195	.....	368	6,548	2,805	.....	2,850	177	5,832
488	458	269	4,075	....	445	2,659	6,261	334	.....	495	1,800	224	1,363	18,373	314	56	.....	2,098	2,465	.....	3,373	599	....	3,972
489	204	71	659	....	14	1,420	2,312	....	.....	...	...	18	23	4,721	266	795	.....	1,000	2,061	601	.....	300	25	926
490	1,307	339	4,409	....	24	3,637	9,951	....	.....	376	950	306	411	21,710	2,116	....	.....	6,126	8,242	..	4,746	....	1	4,747
491	935	334	2,750	....	132	1,000	7,654	2,076	.....	4,194	2,500	1,426	1,230	24,231	23	1,456	.....	830	2,309	1,507	22,821	754	781	25,863
492	814	418	1,222	....	59	3,852	5,960	503	.....	.....	.....	.....	92	12,920	679	2,011	.....	2,574	5,264	.....	.....	92	16	108
493	415	85	610	....	68	3,350	3,830	....	.....	.....	71	...	36	8,465	241	5,122	.....	2,538	7,901	4,763	.....	.....	631	5,394
494	390	101	319	....	....	2,907	3,072	....	.....	.....	144	9	1,295	8,237	521	1,018	.....	500	2,039	.....	.....	1,400	.....	1,400
495	235	45	580	....	25	112	1,127	....	.....	59	.....	19	13	2,215	42	1,630	.....	1,030	2,702	1,009	.....	.....	165	1,174
496	638	81	2,172	....	107	2,720	3,686	....	.....	.....	510	3	123	9,942	1,151	226	.....	.....	1,377	.....	.....	774	.....	774
497	1,114	372	7,478	....	47	3,276	8,062	....	94	1,960	....	1,039	365	23,807	2,351	5	9,010	1,277	12,643	.....	20,070	....	....	20,070
498	1,558	236	9,531	....	87	7,711	7,938	....	...	205	6,000	209	544	34,019	1,584	2,067	.....	1,335	4,986	74	3,079	.....	296	3,449
499	577	225	3,016	....	75	1,642	5,338	....	731	.....	.....	439	105	12,148	.....	1,500	5,080	2,000	8,580	.....	8,788	1,032	.....	9,820
500	353	137	208	....	....	773	3,264	....	1,257	269	.....	801	5	7,667	882	235	8,693	2,932	12,742	.....	15,586	.....	.....	15,586
501	5,826	3,668	20,874	....	444	9,709	21,960	....	5,616	21,514	6,948	7,630	6,052	110,241	444	64,117	30,274	117,293	212,128	24,197	110,583	23,848	14,829	173,457
502	549	313	2,305	....	95	784	3,064	2,148	.....	507	2,100	211	105	12,181	620	2,919	.....	1,717	5,256	406	4,723	1,612	.....	6,741
503	839	145	8,209	....	70	4,508	6,788	2,429	.....	2,125	2,500	585	620	28,818	2,107	342	.....	5,531	7,980	.....	13,066	.....	1,495	14,561
504	762	390	6,401	....	60	4,310	4,971	3,176	18	1,304	1,000	306	340	23,088	4,004	1,353	14,541	400	20,298	.....	7,560	5,650	28	13,238

No.	Village Municipalities and Counties in which located.	Population, 1900.	Assessed values of real and personal property and income taxable, 1900.	Taxes imposed for all purposes, 1900.			Receipts, 1899.									Disbursements, 1899.				
				Total.	Per head.	Mills on $	Balance from 1898.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water, gas and electric light rates.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Administration of justice, including police service.
			$	$	c.		$	$	$	$	$	$	$	$	$	$	$	$	$	$
1	Acton, Halton	1,376	289,930	5,738	4.17	19 8	5,430	5,786	454	1,095	...	94	2,166	.....	817	15,842	619	1,417	284	22
2	Ailsa Craig, Middlesex	714	127,655	2,394	3.35	18.8	45	2,523	275	.....	478	2	23	....	14	3,360	162	96	80	26
3	Alexandria, Glengarry	1,670	229,262	6,478	3.88	28 3	36	7,301	569	2,901	...	.....	16,572	.....	35	27,414	183	2,912	249	174
4	Alvinston, Lambton	1,000	205,120	4,737	4.74	23.1	...	4,792	539	.....	.....	.....	3,568	.....	252	9,151	345	925	188	16
5	Arkona, Lambton	473	83,275	1,064	2.25	12.8	193	1,254	177	.....	.....	.....	250	.....	62	1,936	152	.....	84	13
6	Arthur, Wellington	1,442	252,755	5,319	3.69	21.0	125	5,280	645	.....	3,000	123	2,400	.....	57	11,630	454	170	123	50
7	Ashburnham, Peterborough	1,715	436,059	8,108	4.72	18.6	681	6,801	635	59	.....	12	2,131	.....	275	10,594	370	915	219	322
8	Athens, Leeds	965	180,000	3,688	3.82	20.0	643	3,187	65	.....	.....	10	.....	....	4	3,909	120	66	123	31
9	Ayr, Waterloo	832	260,301	4,213	5.06	16.2	.....	4,271	184	.....	.....	120	577	.....	3	5,155	168	299	76	31
10	Bath, Lennox & Addington	345	117,083	1,685	4.88	14.4	344	1,741	84	.....	.....	200	7	....	6	2,382	173	40	182	28
11	Bayfield, Huron	570	89,126	1,302	2.28	14.6	...	2,315	137	.....	.....	.....	250	.....	11	2,713	212	130	33	6
12	Beamsville, Lincoln	763	185,000	3,842	5.04	20.8	162	4,003	238	414	.....	49	2,000	.....	86	6,952	135	383	185	...
13	Beaverton, Ontario	726	158,268	2,650	3.65	16.7	800	3,270	192	.....	.....	250	500	....	105	5,117	199	230	224	51
14	Beeton, Simcoe	765	153,080	3,107	4.06	20.3	25	3,333	342	1,776	.....	.....	3,602	3,500	667	13,245	538	1,645	200	50
15	Belle River, Essex	460	62,265	1,178	2.56	18.9	429	1,285	183	.....	.....	.....	.....	.....	7	1,904	140	.....	58	.....
16	Blyth, Huron	880	208,095	4,001	4.55	19.2	143	3,974	291	.....	3,477	105	4,226	.....	22	12,238	311	650	535	37
17	Bobcaygeon, Victoria	863	151,711	3,082	3.57	20.3	3,432	3,459	312	...	3,000	206	.....	.....	9	10,418	176	271	213	313
18	Bolton, Peel	596	158,050	2,370	3.98	15.0	173	2,828	356	.....	.....	.....	750	.....	107	4,214	150	52	183	16
19	Bradford, Simcoe	913	247,783	5,421	5.94	21.9	11	5,793	194	.....	.....	.....	1,051	.....	.....	7,049	603	474	392	30
20	Bridgeburg, Welland	1,206	472,280	6,242	5.18	13.2	1,955	6,132	194	.....	17	2	1,396	.....	653	10,349	219	66	159	6
21	Brighton, Northumberland	1,387	445,360	5,889	4.25	13.2	533	5,804	206	...	.....	.....	1,782	.....	209	8,534	343	481	395	50
22	Brussels, Huron	1,228	314,340	7,469	6.08	23.8	1,680	6,316	639	.....	2,400	231	6,500	1,609	79	19,454	433	1,130	341	100
23	Burk's Falls, Parry Sound	704	142,843	3,948	5.61	27.6	981	3,252	149	.....	.....	13	1,500	2,000	642	8,537	192	321	165	30
24	Burlington, Halton	1,233	359,950	4,680	3.80	13.0	241	4,914	376	.....	.....	105	3,400	.....	63	9,099	310	245	363	12
25	Caledonia, Haldimand	986	175,904	3,861	3.92	21.9	548	3,786	391	.....	.....	6	.....	.....	23	4,554	365	22	258	73
26	Campbellford, Northumberl'd	2,460	762,265	13,858	5.63	18.2	11,983	13,127	596	627	.....	70	1,700	.....	208	28,306	467	325	446	615
27	Cannington, Ontario	1,250	279,055	4,184	3.35	15.0	.....	3,924	256	.....	.....	.....	3,175	.....	39	7,434	271	357	116	31
28	Cardinal, Grenville	1,238	314,925	3,935	3.18	12.5	34	4,364	576	.....	.....	.....	1,000	.....	78	6,052	175	675	368	404
29	Casselman, Russell	581	41,442	1,466	2.52	35.4	47	1,173	79	.....	.....	.....	400	.....	.....	1,699	153	.....	78	9
30	Cayuga, Haldimand	1,204	174,400	3,573	2.97	20.5	443	3,221	309	.....	.....	8	650	.....	179	4,810	183	226	116	14

No.	Disbursements, 1899.—*Continued.*										Assets on December 31, 1899.						Liabilities on December 31, 1899.				
	Streets, bridges and parks.	Construction of buildings, water works, etc.	Charities.	County levy.	Payment on account of schools and education.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Waterworks, gas and electric light plant.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
1	563	8,156	64	....	1,520	629	405	800	937	140	15,556	286	463	3,247	8,000	20,200	32,196	1,040	20,885	1,799	....	23,724
2	832	.....	9	191	1,306	12	435	.....	32	179	3,360	....	82	112	....	1,465	1,659	....	.....	23	43	66
3	2,020	1,442	28	234	2,268	.....	924	14,650	2,315	15	27,414	.....	1,162	....	37,900	2,725	41,787	....	35,104	4,222	200	39,526
4	478	.....	360	217	2,404	.....	600	2,714	230	674	9,151	....	.....	474	.....	1,390	4,678	6,542	.....	1,814	1,068	....	2,882
5	126	....	31	119	915	.....	.....	250	10	21	1,721	215	....	.....	.....	.....	990	1,205	.....	.....	.....	.....	.....
6	778	600	12	437	1,962	689	3,000	1,900	1,113	155	11,343	287	822	1,345	....	....	3,060	5,514	1,106	15,500	605	132	17,343
7	1,462	2,569	108	815	2,307	417	95	.....	543	452	10,594	....	622	825	9,000	6,932	17,379	....	16,816	2,131	2,652	21,599
8	401	99	3	258	1,835	.....	.....	.....	.....	502	3,438	471	354	....	.....	693	1,518	.....	.....	.....	1,553	1,553
9	707	4	19	348	1,805	457	321	48	702	170	5,155	....	897	4,206	.....	5,980	11,083	.....	12,504	577	.....	13,081
10	267	.....	93	350	1,247	.....	.....	.....	.....	5	2,382	.....	121	2,000	.....	1,707	3,828	.....	.....	7	20	27
11	346	.....	4	89	1,200	.....	.....	256	5	64	2,348	368	....	.....	.....	600	968	....	.....	.....	.....	.....
12	889	.....	43	....	1,650	.....	390	2,000	799	327	6,801	151	231	.....	15,000	2,786	18,168	374	12,980	1,060	8	14,422
13	535	.....	19	246	817	116	475	760	304	97	4,013	1,104	128	2,816	.....	8,490	12,538	781	4,925	1,170	....	6,876
14	388	3,741	63	....	744	.....	500	3,602	1,087	551	13,109	136	102	.....	36,000	7,422	43,660	376	19,603	1,000	100	21,079
15	310	.....	2	143	722	.....	.....	.....	.....	156	1,531	373	359	.....	.....	760	1,492	340	.....	.....	10	350
16	396	....	19	153	1,316	325	3,407	4,201	625	131	12,106	132	125	4,245	735	4,470	9,707	872	10,099	3,360	.....	14,331
17	411	.....	51	298	1,200	429	3,000	....	225	....	6,587	3,831	202	1,556	.....	5,847	11,436	2,161	3,000	.....	.....	5,161
18	794	.....	17	165	1,605	.....	136	750	44	210	4,122	92	2	.....	.....	1,380	1,474	342	290	....	600	1,232
19	425	....	44	308	2,350	....	551	1,474	259	130	7,035	14	4,530	.....	.....	9,928	14,472	1,862	4,123	1,051	250	7,286
20	1,636	....	2	825	2,473	16	361	1,396	134	1,114	8,407	1,942	678	16	.....	4,577	7,213	2,300	2,492	.....	5,603	10,395
21	745	415	116	369	3,600	.....	.....	1,610	47	363	8,534	....	.....	.....	140	8,900	9,040	....	.....	172	.....	172
22	8,172	1,614	9	247	1,574	3,957	.....	.....	1,184	25	18,786	668	709	8,330	.....	15,415	25 122	246	41,309	6,667	....	48,222
23	235	48	19	....	3,333	74	175	2,100	405	414	7,511	1,026	350	548	....	1,854	3,778	1,600	8,348	....	384	10,332
24	1,924	....	237	394	1,606	.....	254	3,200	180	133	8,858	241	263	2,000	1,359	8,098	11,961	361	1,148	600	.....	2,109
25	677	....	7	318	1,900	.....	.....	.....	330	62	4,012	542	375	....	.....	6,800	7,717	....	5,500	.....	.....	5,500
26	2,237	7,998	158	568	4,902	.....	2,719	2,950	2,156	235	25,776	2,530	1,480	.....	30,000	7,392	41,402	.....	40,058	.....	3,348	43,406
27	1,238	....	36	343	1 600	.....	361	2,779	190	112	7,434	....	760	....	.....	7,642	8,402	.....	3,090	820	.....	3,910
28	860	....	58	247	1,590	.....	163	1,000	213	260	6,013	39	159	.....	.....	3,400	3,598	258	3,015	.....	50	3,323
29	125	.	...	152	505	....	.....	400	189	74	1,685	14	1,395	350	.....	306	2,059	635	2,000	1,228	185	4,108
30	695	33	53	225	1,450	....	488	650	172	316	4,621	189	437	....	.....	4,500	5,126	.....	2,812	200	....	3,012

No.	Village Municipalities and Counties in which located.	Population, 1900.	Assessed values of real and personal property and income taxable, 1900.	Taxes imposed for all purposes, 1900.			Receipts, 1899.									Disbursements, 1899.			
				Total.	Per head.	Mills on $	Balance from 1898	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water, gas and electric light rates.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Administration of justice, including police service.
			$	$	$ c		$	$	$	$	$	$	$	$	$	$	$	$	$	$
31	Chesley, Bruce	1,668	365,600	8,322	4 99	22.7	4,318	7,836	284	....	....	17	1,500	..	603	14,558	484	626	704	362
32	Chesterville, Dundas	847	152,510	2,572	3 04	16.9	....	2,997	286	....	....	....	900	872	54	5,109	120	....	166	....
33	Chippawa, Welland	446	122,115	1,618	3 63	13.2	399	1,573	354	....	....	4	500	....	....	2,830	128	13	103	....
34	Clifford, Wellington	615	123,212	1,608	2 61	13.1	889	1,859	231	....	730	22	....	....	309	4,040	250	.....	149	18
35	Cobden, Renfrew	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
36	Colborne, Northumberland	1,004	298,370	5,098	5 08	17.1	725	5,771	182	....	....	....	1,900	....	28	8,606	135	930	87	44
37	Creemore, Simcoe	629	127,260	3,026	4 82	23.8	418	2,279	250	....	....	....	300	....	43	3,290	167	129	116	45
38	Delhi, Norfolk	826	164,950	3,009	3 64	18.2	665	3,275	155	....	....	....	200	....	228	4,523	183	8	114	10
39	Drayton, Wellington	790	163,110	3,665	4 64	22.5	110	3,717	409	....	88	....	1,400	....	170	5,894	173	189	262	34
40	Dundalk, Grey	795	127,315	3,146	3 96	24.7	121	2,737	252	386	..	....	321	5,000	246	9,063	155	44	91	20
41	Dutton, Elgin	815	198,045	3,790	4 65	19.1	280	3,009	166	....	....	....	1,000	....	250	4,705	369	44	120	17
42	East Toronto York	1,504	509,465	12,323	8 19	24.2	732	15,754	137	1,570	3,828	415	1,563	....	230	24,229	1,069	1,674	869	118
43	Eganville, Renfrew	1,009	273,785	3,053	3 06	11.3	345	3,867	501	....	....	....	....	....	....	4,713	106	81	45	8
44	Elmira, Waterloo	1,089	310,240	3,904	3 58	12.6	95	3,501	245	....	500	11	....	....	52	4,404	199	158	70	47
45	Elora, Wellington	1,186	313,265	7,179	6 05	22.9	2,231	7,051	576	....	....	....	....	....	427	10,284	768	504	323	16
46	Embro, Oxford	593	193,363	2,553	4 31	13.2	1,652	2,569	251	....	....	....	....	....	81	4,553	226	.....	146	85
47	Erin, Wellington	518	111,760	1,367	2 64	12.2	99	1,508	128	....	....	....	....	....	56	1,791	106	47	70	6
48	Exeter, Huron	1,846	509,900	10,533	5 71	20.7	4,435	8,622	492	....	....	40	2,800	1,396	342	18,127	622	1,457	297	33
49	Fenelon Falls, Victoria	1,131	311,675	4,645	4 11	14.9	39	5,461	388	....	.....	125	.....	..	33	6,046	402	228	728	189
50	Fergus, Wellington	1,505	415,629	8,721	5 79	21.0	283	8,676	699	.....	100	59	702	....	594	11,113	427	713	220	400
51	Fort Erie, Welland	825	245,980	5,107	6 19	20.8	26	4,608	320	....	....	....	972	....	17	5,942	317	.....	354	11
52	Garden Island, Frontenac	266	54,200	1,488	5 72	27.5	.....	1,489	....	....	....	....	....	....	....	1,489	25	.....	12	....
53	Georgetown, Halton	1,438	343,280	7,065	4 91	20.6	...	7,060	281	2,212	....	....	2,672	....	194	12,419	222	784	248	159
54	Glencoe, Middlesex	945	283,400	6,625	6 38	21.3	277	5,963	767	....	5,258	....	4,300	....	546	17,111	347	642	136	6
55	Grand Valley, Dufferin	763	141,300	2,826	3 70	20.0	578	3,082	179	....	....	....	1,200	....	592	5,631	143	....	236	....
56	Grimsby, Lincoln	915	227,435	4,874	5 33	21.4	....	4,481	127	....	....	6	2,900	....	315	7,829	155	620	260	11
57	Hagersville, Haldimand	908	207,250	3,783	4 17	18.3	241	3,436	97	....	....	....	1,100	....	....	4,874	197	.....	122	14
58	Hanover, Grey	1,522	186,450	4,053	2 66	21.7	....	....	....	....	....	....	....	....	....	....	....	....	....	....
59	Hastings, Northumberland	769	171,120	3,270	4 25	19.1	417	4,070	336	....	....	.....	500	....	.....	5,323	167	490	253	120
60	Havelock, Peterborough	1,025	150,660	3,019	2 95	20.1	210	3,043	318	.....	.....	.....	1,100	.....	2	4,673	140	140	76	92

No.	Disbursements, 1899.—*Continued.*											Assets on December 31, 1899.					Liabilities on December 31, 1899.				
	Streets, bridges and parks.	Construction of buildings, water works, etc.	Charities.	County levy.	Payment on account of schools and education.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Waterworks, gas and electric light plant.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
31	837	....	9	360	2,380	.....	522	3,000	837	1,920	12,041	2,517	308	.....	.....	9,050	11,875	3,000	17,677	.....	.....	20,677
32	573	.. ..	....	163	1,232	.. ..	209	1,088	88	105	3,744	1,365	317	.....	.....	933	2,615	.....	663	923	452	2,038
33	925	.. ..	31	191	730	.....	.....	.....	.....	38	2,209	621	269	500	.....	3,357	4,687	800	.....	500	.....	1,300
34	260	.....	5	253	1,000	752	.....	.....	.....	49	2,736	1,304	.....	752	.....	1,000	3,056	.....	.....	.....	.....	.....
35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
36	1,902	.....	39	255	.....	.....	700	1,900	18	159	6,169	2,437	8	.....	.....	3,872	6,317	2,034	.....	.....	.....	2,034
37	852	.....	14	175	979	.....	.....	300	6	269	3,052	238	1,194	.....	.....	200	1,632	772	.....	.....	427	1,199
38	677	.....	14	313	1,952	.....	.....	200	5	364	3,840	683	319	.....	.....	.....	1,002	552	.....	.....	2,100	2,652
39	471	478	42	249	1,337	40	433	1,400	157	303	5,568	326	225	40	.....	5,100	5,691	1,150	1,469	.....	28	2,647
40	313	6,509	61	196	868	.....	254	.....	101	451	9,063	.....	528	.....	6,000	460	6,988	369	6,143	321	1,805	8,638
41	981	.....	25	225	1,075	.....	315	1,000	354	180	4,705	.....	1,010	.....	.....	5,578	6,588	.....	6,180	.....	.....	6,180
42	843	848	16	1,642	2,055	2,597	4,762	3,500	3,881	296	24,170	59	13,205	14,218	22,392	25,578	75,452	1,259	63,295	6,938	906	72,398
43	584	.....	27	435	1,915	.....	358	....	75	92	3,726	987	1,707	.....	.....	3,230	5,924	737	936	.....	.....	1,673
44	1,216	.....	5	348	1,113	.....	400	.....	400	422	4,378	26	.....	.....	.....	800	826	.....	7,600	.....	1,509	9,109
45	1,005	.....	5	528	3,418	...	1,014	.....	739	414	8,734	1,550	4,671	.....	.....	13,617	19,838	2,425	12,408	.....	.....	14,833
46	741	.....	9	318	1,287	.....	142	.....	139	63	3,156	1,397	31	.....	.....	7 000	8,428	830	2,638	.....	.....	3,468
47	101	.....	10	222	650	.....	.....	.....	.....	95	1,307	484	20	.....	.....	500	1,004	.....	.....	.....	350	350
48	2,598	.....	92	370	3,059	505	577	2,800	946	775	14,131	3,996	36	871	1,000	11,490	17,393	3,271	18,314	.....	.....	21,585
49	976	.....	29	429	1,743	125	.....	153	217	394	5,631	415	2,639	3,270	.....	2,635	8,959	1,487	3,000	318	105	4,910
50	1,147	..	22	1,042	3,700	480	617	1,319	339	427	10,853	260	1,120	1,591	.....	18,044	21,015	20	7,744	309	506	8,579
51	2,065	15	10	246	1,315	..	405	700	433	71	5,942	.....	803	.....	.....	9,775	10,578	.....	7,537	1,772	534	9,843
52	54	.....	....	325	894	.....	.....	.....	.....	179	1,489	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
53	734	107	75	348	3,549	.....	800	2,478	2,678	237	12,419	.....	1,229	.....	40,000	11,450	52,679	...	50,400	1,172	....	51,572
54	1,245	2,422	11	813	2,407	.....	1,504	5,300	1,059	208	16,103	1,008	1,768	.....	.....	7,650	10,426	401	11,466	2,500	.....	14,367
55	1,342	.....	51	174	215	.....	.....	1,200	20	771	4,152	1,479	71	.....	.....	146	1,696	1,351	.....	.....	2,942	4,293
56	646	.....	46	458	1,784	.....	626	1,316	274	329	6,525	1,304	166	.....	.....	5.105	6,575	634	4,254	1,890	.....	6,778
57	1,489	.....	36	234	1,484	.....	268	.....	213	91	4,148	726	295	.....	.....	20	1,041	44	3,999	1,100	45	5,188
58	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
59	736	.....	170	212	1,168	.....	370	800	203	111	4,800	523	249	... ..	.....	7,800	8,572	....	388	2,200	.....	2,588
60	1,377	.....	7	121	1,186	.....	.....	.....	.....	321	3,460	1,213	23	.....	.....	396	1,632	.....	.....	1,138	1,635	2,773

No.	Village Municipalities and Counties in which located.	Population, 1900.	Assessed values of real and personal property and income taxable, 1900.	Taxes imposed for all purposes, 1900.			Receipts, 1899.									Disbursements, 1899.			
				Total.	Per head.	Mills on $	Balance from 1898.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water, gas and electric light rates.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.	Allowances, salaries and Commission.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Administration of justice, including police service.
			$	$	$ c.		$	$	$	$	$	$	$	$	$	$	$	$	$	$
61	Hensall, Huron	881	214,635	2,267	2 57	10.6	340	3,374	152	.....	.....	.....	400	.....	...	4,266	97	104	545	24
62	Hintonburg, Carleton	2,254	407,124	11,608	5 15	28.5	549	8,140	357	.....	.....	1,036	3,000	60,000	3	73,085	643	462	686	368
63	Holland Landing, York	443	68,860	1,015	2 29	14.7	191	1,024	29	.....	.....	.....	300	.....	12	1,556	130	.....	86	.....
64	Iroquois, Dundas	1,203	326,400	5 935	4 93	18.5	2,044	6,347	483	112	.....	.....	3,000	5,000	2	16,988	263	108	1,198	270
65	Kemptville, Grenville	1,410	347,050	7,003	4 97	20 2	1,865	6,295	465	.....	.....	250	1,400	.....	313	10,528	273	221	496	84
66	Lakefield, Peterborough	1,119	320,395	4,493	4 02	14.0	55	4,467	551	.....	.....	167	3,000	.....	91	8,271	345	549	211	153
67	Lanark, Lanark	913	178,850	3,811	4 17	21.3	132	4,117	308	.....	.....	.....	1,200	.....	17	5,774	376	313	115	165
68	Lancaster, Glengarry	535	77,470	1,768	3 30	22.8	31	1,358	267	.....	..	.....	200	.....	17	1,873	105	203	34	13
69	L'Orignal, Prescott	1,123	121,075	2,330	2 07	19.2	103	2,172	140	.....	.....	.....	.....	.....	.....	2,375	207	.....	37	9
70	Lucan, Middlesex	820	177,145	3,367	4 11	19.0	1,051	3,186	317	.....	.....	164	.....	.....	10	4,728	185	.....	110	24
71	Lucknow, Bruce	1,168	289,321	6,435	5 81	22.2	1,330	7,148	613	.....	1,132	165	.....	.....	210	10,598	390	1,515	168	97
72	Madoc, Hastings	1,083	319,359	6,041	5 58	18.9	..	6,322	514	.....	6,222	33	4,590	14,000	615	32,296	349	277	311	94
73	Markdale, Grey	870	180,250	3,034	3 49	16.8	303	2,875	247	.....	.....	.....	5,626	.....	648	9,699	153	226	242	23
74	Markham, York	1,055	237,430	5,539	5 25	23.3	928	7,189	191	835	.....	2	1,800	.....	10	10,955	189	1,934	237	30
75	Marmora, Hastings	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
76	Maxville, Glengarry	683	57,225	1,354	1 98	23.7	4	1,584	4	.....	.....	.....	.....	.....	.....	1,592	62	14	41	11
77	Merrickville, Grenville	1,080	296,050	4,646	4 30	15 7	395	5,421	374	.....	.....	.....	800	.....	.....	6,990	486	309	362	7
78	Merritton, Lincoln	1,681	642,095	15,273	9 09	23.8	.....	14,333	446	2,960	445	...	1,712	.....	60	19,956	1,028	3,219	549	38
79	Millbrook, Durham	874	186,730	3,167	3 62	17.0	85	5,151	556	.....	.....	.....	650	.....	136	6,578	307	760	167	25
80	Milverton, Perth	686	144,160	2,667	3 89	18.5	337	2,371	86	.....	.....	.....	.....	.....	41	2,835	130	.....	108	6
81	Morrisburg, Dundas	1,610	543,025	10,668	6 63	19 6	470	10,037	503	1,875	.....	.....	.....	.....	483	13,368	173	1,333	199	127
82	Newboro', Leeds	408	90 665	1,740	4 26	19.2	573	1,812	98	.....	.....	60	.....	.....	36	2,579	65	1	31	5
83	Newburg, Lennox and Add	631	112,210	3,376	5 35	30.1	112	3,793	31	.....	2,686	14	.....	.....	.....	6,636	212	66	77	7
84	Newbury, Middlesex	436	63,610	1,148	2 63	18.0	329	1,241	126	.....	.....	.....	500	.....	166	2,362	91	.....	76	9
85	Newcastle, Durham	525	190,406	3,870	7 37	20.3	583	4,566	110	.....	.....	.....	600	.....	15	5,874	254	119	288	81
86	New Hamburg, Waterloo	1,214	341,258	5,691	4 69	16.7	391	5,304	648	.....	500	95	1,365	.....	46	8,349	254	901	251	96
87	Niagara Falls South, Welland	1,356	330,480	6,926	5 11	21 0	.....	6,595	66	795	.....	26	1,955	6,000	.....	15,437	301	983	359	8
88	Norwich, Oxford	1,374	315,925	7,403	5 39	23.4	2,035	6,525	448	.....	1,360	15	7,067	.....	96	17,546	249	1,488	304	416
89	Norwood, Peterborough	980	226,865	4,760	4 86	21.0	201	4,919	305	.....	.....	168	791	.....	105	6,489	214	572	157	33
90	Oil Springs, Lambton	975	244,910	5,083	5 21	20.8	.....	4,897	456	.....	..	.....	2,500	.....	227	8,080	347	.....	343	138

No.	Disbursements, 1899.—*Continued.*											Assets on December 31, 1899.						Liabilities on December 31, 1899.				
	Streets, bridges and parks.	Construction of buildings, water works, etc.	Charities.	County levy.	Payments on account of schools and education.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Waterworks, gas and electric light plant.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
61	1,362	61	17	169	1,358	.....	.....	400	4	124	4,265	1	93	.....	.....	365	459	.....	.....	.....	58	58
62	1,589	18,360	....	349	3,049	204	391	3,000	1,625	1,371	62,097	10,988	6,757	.....	1,205	75,000	6,733	100,683	3,176	77,854	.....	15,616	96,646
63	183	.....	.....	134	512	.....	100	300	16	.....	1,461	95	318	.....	.....	.....	548	961	134	100	200	26	460
64	1,124	3,786	99	555	2,883	.....	750	3,000	435	374	14,845	2,143	1,065	.....	.....	3,473	6,027	12,708	2,358	11,593	.....	.....	13,951
65	1,504	.....	88	402	3,000	.....	.....	1,775	202	187	8,232	2,296	922	2,318	.....	.....	13,088	18,594	.....	16,554	.....	450	17,004
66	549	229	50	462	1,494	409	.....	3,000	568	172	8,191	80	100	3,968	229	10,375	14,752	462	10,000	200	250	10,912
67	518	.....	18	344	1,835	.....	251	1,200	224	170	5,529	245	.....	.....	.....	7,200	7,445	.....	.....	3,421	.....	.....	3,421
68	313	.....	33	112	734	.....	.....	.....	.....	101	1,648	225	871	.....	.....	765	1,861	817	.....	.....	203	44	1,064
69	607	.....	8	100	1,119	.....	.....	.....	.....	76	2,163	212	415	.....	.....	.....	627	301	.....	.....	.....	213	514
70	643	.....	1	153	1,237	436	.....	200	450	57	3,496	1,232	.....	3,487	.....	.....	8,391	133	9,000	.....	.....	.....	9,133
71	1,143	.....	9	262	1,520	1,888	.....	.....	1,120	255	8,367	2,231	2,092	15,768	10,000	5,900	33,991	309	19,500	4,076	.....	23,885
72	860	54	45	628	2,541	33	7,894	12,587	695	5,928	32,296	.....	4,040	.....	.....	6,404	10,444	2,287	18,557	452	365	21,661
73	5,200	.....	14	473	1,020	.....	338	600	276	657	9,222	477	253	.....	.....	8,038	8,768	520	4,323	5,425	300	10,568
74	432	1,300	12	391	1,299	....	1,187	1,800	1,026	44	9,881	1,074	738	.....	14,100	4,103	20,015	802	18,416	.....	222	19,440
75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
76	342	....	12	81	675	....	.....	.....	.....	43	1,281	311	236	.....	.....	47	594	.....	.....	.....	.....	.....
77	1,100	.....	22	340	1,551	.....	1,300	800	520	160	6,957	33	240	.....	.....	5,000	5,273	355	4,100	.....	188	4,643
78	2,017	.....	18	1,039	4,946	412	1,963	1,685	2,783	259	19,956	.....	2,050	412	73,407	12,558	88,427	.....	61,012	712	.....	61,724
79	625	.....	10	198	1,910	.....	244	650	218	478	5,592	986	394	.....	.....	7,860	9,240	514	3,695	....	114	4,323
80	867	..	....	182	500	.....	217	.....	227	6	2,243	592	20	.....	.....	.....	612	.....	5,373	.....	.....	5,373
81	2,360	.....	167	726	4,419	.....	1,580	.....	1,503	146	12,733	635	143	.....	30,150	3,693	34,621	.....	28,004	.....	.....	28,004
82	271	.....	....	121	819	200	129	.....	280	17	1,939	640	217	2,512	.....	1,263	4,632	.....	5,325	.....	.....	5,325
83	375	.....	19	330	1,409	400	3,000	.....	220	10	6,125	511	3,238	.....	.....	100	3,849	2,095	2,000	511	230	4,836
84	372	..	13	134	459	....	400	300	97	67	2,018	344	858	.....	.....	2,396	3,598	571	1,000	200	.....	1,771
85	420	478	108	227	1,000	.....	167	600	104	93	3,939	1,935	.....	.....	.....	3,135	5,070	.....	1,674	.....	.....	1,674
86	1,105	54	5	410	4,200	.....	217	.....	236	620	8,349	.....	2,470	3,000	.....	8,635	14,105	.....	7,876	1,365	237	9,478
87	6,654	796	170	392	2,489	....	734	1,417	706	428	15,437	.....	4,120	.....	11,000	1,550	16,670	.....	17,841	1,955	2,173	21,969
88	6,393	.....	17	511	1,592	1,808	596	2,000	827	77	16,273	1,273	485	3,019	.....	5,612	10,389	.....	15,623	5,500	.....	21,126
89	1,137	.....	19	....	2,073	330	127	791	570	95	6,118	371	386	4,336	.....	5,595	10,887	444	9,572	.....	188	10,604
90	552	26	6	210	1,582	.....	879	2,000	541	953	7,577	503	4,011	.....	.....	4,200	8,714	9	12 709	2,500	.....	15,218

No.	Village Municipalities and Counties in which located.	Population, 1900.	Assessed values of real and personal property and income taxable, 1900.	Taxes imposed for all purposes, 1900			Receipts, 1899.										Disbursements, 1899.			
				Total.	Per head.	Mills on $	Balance from 1898.	Municipal and school taxes.	License fees, rents, fines, etc.	Water, gas and electric light rates.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous	Total receipts.	Allowances, salaries and commission.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Administration of justice, including police service.
			$	$	$ c.		$	$	$	$	$	$	$	$	$	$	$	$	$	$
91	Onemee, Victoria	614	106,438	2,006	3 27	18.8	136	2,070	201	.....	.....	.....	1,127	.....	.....	3,534	182	35	135	27
92	Ottawa East, Carleton	1,108	294,495	4,155	3 75	14.1	329	3,802	89	.....	.....	24	..	.....	.....	4,244	357	...	91	12
93	Paisley, Bruce	1,036	292,805	5,270	5 09	18.0	1,904	4,767	992	.....	.....	.....	1,205	.....	86	8 754	218	834	377	212
94	Point Edward, Lambton	983	185,815	2,737	2 78	14.7	170	3,583	153	.....	.....	.....	700	.....	.....	4,606	309	.....	100	206
95	Port Carling, Muskoka	325	55,302	986	3 03	17.8	148	650	42	.....	.....	.....	250	.....	92	1,182	87	.....	108	10
96	Port Colborne, Welland	1,132	322,415	5,422	4 79	16.8	2,464	6,040	367	645	.....	.....	5,000	3,000	37	17,553	714	254	232	34
97	Port Dalhousie, Lincoln	859	282,129	5,218	6 07	18.5	1,428	4,226	615	.....	.....	.....	3,000	.....	.....	9,264	241	10	121	..
98	Port Dover, Norfolk	1,106	257,215	5,345	4 83	20 8	730	5,068	356	.....	.....	.....	500	...	2	6,656	191	444	175	31
99	Port Elgin, Bruce	1,365	292,596	6,196	4 54	21.2	...	5,662	939	.....	4,700	82	.....	3,000	131	14,514	179	498	255	412
100	Port Perry, Ontario	1,446	375,780	9,270	6 41	24.7	475	9,052	564	.....	.....	.....	.....	.....	23	10,114	580	827	182	113
101	Port Rowan, Norfolk	648	133,720	2,848	4 40	21.2	188	2,733	85	.....	.....	.....	1,799	.....	4	4,804	103	348	103	.....
102	Port Stanley, Elgin	506	145,585	2,231	4 41	15.3	157	1,888	372	.....	.....	.....	1,125	.....	8	3,550	293	108	227	111
103	Portsmouth, Frontenac	664	118,268	2,405	3 85	20.3	701	2,823	67	.....	.....	.....	.....	.....	33	3,624	220	.....	122	80
104	Richmond, Carleton	377	72,325	1,692	4 49	23.4	...	2,385	58	.....	.....	.....	.....	.....	78	2,521	203	.....	81	12
105	Richmond Hill, York	625	157,375	2,205	3 53	14.0	259	2,448	446	.....	.....	.....	266	.....	202	3,621	149	151	457	9
106	Rockland, Russell	1,583	74,825	4,443	2 81	59.4	270	5,182	132	.....	.....	.....	870	.....	.....	6,404	235	..	142	35
107	Shelburne, Dufferin	1,121	351,365	6,631	5 92	18.9	263	7,216	699	.....	.....	.....	1,600	8,500	879	19,157	530	630	256	9
108	Southampton, Bruce	1,641	284,209	5,115	3 12	18.0	1,001	4,355	565	.....	.....	.....	693	10,000	556	17,170	310	553	251	3
109	Springfield, Elgin	481	91,675	1,611	3 41	17.9	.....	1,733	96	.....	.....	.....	750	.....	58	2,637	100	40	147	13
110	Stirling, Hastings	776	174,066	4,038	5 20	23.2	121	3,360	134	.....	712	6	760	.....	127	5,220	189	20	43	.....
111	Stouffville, York	1,285	331,775	5,386	4 19	16 2	662	4,594	182	224	.....	.....	.....	.....	189	5,851	270	306	263	6
112	Streetsville, Peel	528	157,750	2,321	4 40	14.7	565	2,009	184	.....	.....	.....	200	.....	1	2,959	367	160	162	4
113	Sturgeon Point, Victoria	330	18,500	370	1 12	20.0	...	366	.....	.....	.....	.....	160	.....	.....	526	25	.....	40	.....
114	Sundridge, Parry Sound	460	63,595	1,914	4 16	30.1	58	1,820	129	.....	.....	.....	666	.....	155	2,823	198	..	171	13
115	Sutton, York	605	132,925	1,440	2 38	10.8	362	1,634	60	.....	.....	.....	.....	.....	52	2,108	99	60	53	15
116	Tara, Bruce	706	216,250	3,027	4 29	14 0	579	2,861	218	.....	.....	366	.....	8,000	207	12,231	164	19	317	6
117	Teeswater, Bruce	854	240,000	4,353	5 10	18.1	1,350	4 240	449	.....	.....	72	350	.....	53	6,514	285	465	116	13
118	Thamesville, Kent	883	215,300	5,727	6 49	26 6	2,614	4,674	222	.....	.....	.....	869	.....	140	8,519	291	432	194	335
119	Thedford, Lambton	631	98,950	1,724	2 73	17.4	11	1,619	103	.....	.....	.....	950	.....	25	2,708	127	26	59	14
120	Tilbury, Kent	1,031	207,580	6,431	6 24	31.0	14	5,700	222	1,006	83	19	10,700	.....	87	17,831	285	1,875	165	6

No.	Disbursements, 1899.—*Continued.*											Assets on December 31, 1899.						Liabilities on December 31, 1899.				
	Streets, bridges and parks.	Construction of buildings, water works, etc.	Charities.	County levy.	Payment on account of schools and education.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Waterworks, gas and electric light plant.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
91	668	.....	16	199	1,029	.....	.....	1,050	36	157	3,534	.....	.....	.....	.....	900	900	.....	.....	77	.....	77
92	996	.....	.....	245	400	.....	269	.....	284	31	2,688	1,556	1,321	500	.....	3 656	7,033	1,466	4,381	.....	16	5,863
93	1,047	.....	.....	399	1,571	.....	519	1,205	130	222	6,764	1,990	315	.....	.....	17,900	20,205	.....	1,719	.....	.....	1,719
94	283	.....	29	.....	1,598	.....	.....	1,300	50	158	4,033	573	2,023	.....	.....	1,672	4,268	1,681	.....	.....	.....	1,681
95	133	.....	18	.....	217	.....	.....	275	12	173	1,033	149	905	.....	.....	364	1,418	290	.....	225	884	1,399
96	806	1,800	6	429	5,109	.....	297	6,400	782	117	16,980	573	157	.....	21,050	1,743	23,523	.....	18,418	.....	.....	18,418
97	1,120	541	398	390	1,815	.....	358	3,000	364	17	8,375	889	1,509	.....	.....	900	3,298	1,825	5,977	.....	231	8,033
98	819	.....	26	513	2,270	.....	673	500	349	132	6,124	533	869	.....	.....	4,500	5,902	690	6,851	.....	.....	7,541
99	880	363	41	420	3,027	4,770	1 861	213	1,191	299	14.409	105	2,240	2,270	.....	10,100	14,715	.....	17,915	.....	234	18,149
100	632	.....	56	498	3,694	.....	1,417	100	1,575	96	9,770	341	2,379	.....	.....	13,584	16,307	.....	31,911	3,375	30	38,316
101	419	.....	7	250	844	.....	134	2,075	65	456	4,804	.....	291	.....	.....	30	321	74	442	109	49	674
102	622	.....	.....	137	767	.....	.....	1,075	26	79	3,445	105	900	.....	.....	1,590	2,595	190	.....	101	348	642
103	603	.....	.....	1,150	1,080	.....	.....	35	.....	.....	3,326	298	1,140	.....	.....	3,109	4,547	976	.....	.....	42	1,018
104	400	134	18	.....	646	6	48	120	193	55	1,916	605	757	786	.....	2,480	4.628	1,145	3,364	500	.....	5.009
105	464	.....	33	297	1,054	.....	51	266	138	182	3,251	370	63	63	.....	4,394	4,890	.....	2,900	.....	.....	2,900
106	1,474	...	140	200	3,272	.....	.....	400	19	196	6,113	291	1,586	.....	.....	1,000	2,877	622	.....	799	605	2,026
107	416	303	23	513	9,875	.....	1,720	2,600	1,139	555	18,569	588	592	.....	12,000	12,670	25,850	1,625	20,150	.....	553	22,328
108	1,207	87	44	268	2,021	10, 000	460	693	485	173	16,655	615	3,843	10,000	.....	6,800	21,258	...	18,662	...	...	18,662
109	768	.....	2	172	455	.....	.....	834	21	13	2,565	72	212	.....	.....	1,576	1,860	.....	.....	.....	315	315
110	180	.....	150	783	1,500	418	280	256	224	192	4,235	985	2,406	212	.....	3,125	6,728	2,736	3,720	760	.....	7,216
111	544	885	14	522	.....	.....	783	...	1,099	183	4,875	976	523	.....	25.000	3,186	29,685	1,621	25,116	.....	4	26,741
112	415	230	6	175	1,080	.....	.....	200	4	109	2,912	47	699	.....	.....	1,695	2,441	237	.....	.....	7	244
113	209	.....	.....	25	.....	.....	.....	.....	.....	183	482	14	11	.....	.....	.....	55	30	.....	164	.....	194
114	52	.....	.....	.....	767	166	.....	497	360	287	2,511	312	1,176	5,498	.....	335	7,321	479	5,000	1,998	11	7,488
115	598	.....	5	209	617	.....	.....	.....	.....	201	1,857	251	25	.....	.....	4,054	4,330	.....	.....	.....	.....	.....
116	488	....	6	242	5,186	4,809	.....	.....	397	249	11,883	348	.....	6,523	.....	4,000	10,871	.....	9,600	.....	.....	9,600
117	595	117	111	292	1,476	598	.....	350	518	55	4,991	1,523	196	3,029	8,873	7,072	20,693	.....	10,560	....	510	11,010
118	1,719	...	13	.....	1,225	.....	689	869	271	266	6,243	2,276	115	.....	1,000	8,800	12,191	1,854	4,806	.....	150	6,810
119	572	30	7	128	952	.....	.....	553	30	25	2,520	188	15	.....	.....	80	283	.....	.....	618	.....	618
120	2,395	.....	36	229	1,592	148	1,959	7,607	1,286	227	17,810	21	5,525	437	16,969	6,327	29,279	797	20,864	6,977	567	29,205

VILLAGE MUNICIPALITIES, 1899-1900.—*Concluded.*

No.	Village Municipalities and Counties in which located.	Population, 1900.	Assessed value of real and personal property and income taxable, 1900.	Taxes imposed for all purposes, 1900. Total.	Per head.	Mills on $	Receipts, 1899. Balance from 1898.	Municipal and school taxes.	License fees, rents, fines, etc.	Water, gas and electric light rates.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.	Disbursements, 1899. Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Administration of justice, including police service.
		$	$	$	$		$	$	$	$	$	$	$	$	$	$	$	$	$	$
121	Tiverton, Bruce	457	74,805	1,526	3 34	20.4	304	1,191	161	.....	.....	.....	.....	.....	.....	1,656	129	....	189	23
122	Tottenham, Simcoe	574	131,795	3,025	5 27	22.9	303	2,397	215	.....	.....	.....	629	....	24	3,568	113	98	130	14
123	Tweed, Hastings	1,128	229,285	4,619	4 09	20 1	1,661	3,772	270	.....	.....	.....	.....	.....	336	6,039	266	454	226	21
124	Vienna, Elgin	349	76,790	1,564	4 48	20.4	159	1,368	61	.....	.....	4	205	.....	9	1,806	154	....	68	8
125	Wardsville, Middlesex	327	60,076	1,230	3 76	20 5	130	1,544	10	.....	.....	.....	.....	.....	51	1,735	72	....	89	3
126	Waterdown, Wentworth	600	165,891	1,623	2 71	9 8	542	1,782	127	.....	.....	.....	.....	.....	21	2,472	156	.....	74	20
127	Waterford, Norfolk	1,060	268,150	6,762	6 38	25.2	..	6,521	213	.....	.....	.....	1,000	....	7	7,741	350	84	82	17
128	Watford, Lambton	1,331	250,712	6,450	4 85	25.7	431	5,959	781	.....	500	.....	3,700	.....	125	11,496	460	520	207	9
129	Wellington, Prince Edward	612	199,674	2,230	3 64	11.2	189	1,482	162	.....	.....	.....	500	.....	15	2,348	103	....	148	10
130	Weston, York	1,004	277,349	6,996	6 97	25.2	1,391	4,948	207	....	....	41	.....	7,000	212	13,799	230	....	331	21
131	Winchester, Dundas	1,078	231,985	5,607	5 20	24.2	143	4,323	306	.....	.....	.....	1,375	..	343	6,490	108	101	239	46
132	Woodbridge, York	641	107,560	1,643	2 56	15.3	822	1,627	123	.....	.....	100	400	....	172	3,244	172	71	88	7
133	Woodville, Victoria	536	84,900	1,146	2 14	13.5	72	1,604	118	.....	.....	....	350	....	..	2,144	115	75	75	4
134	Wroxeter, Huron	438	112,247	1,169	2 67	10.4	272	1,317	196	.....	.....	136	.....	....	177	2,098	187	.....	27	...
135	Wyoming, Lambton	732	130,145	3,041	4 15	23.4	709	2,881	336	....	.....	.....	1,406	....	126	5,458	248	109	99	103
	Town municipalities and county in which located.																			
1	Alliston, Simcoe	1,798	323,311	7,077	3 94	21.9	1,479	7,219	550	171	245	175	.....	....	303	10,142	851	728	218	166
2	Almonte, Lanark	3,141	814,510	17,709	5 64	21 7	817	17,486	1,485	..	.....	.....	7,125	2,100	105	29,118	553	1,697	1,335	578
3	Amherstburg, Essex	2,058	462,760	13,214	6 42	28 6	79	13,963	545	3,099	....	.. ..	51,669	5,170	234	74,759	1,129	1,896	1,074	389
4	Arnprior, Renfrew	3,733	737,077	15,832	4 24	21.5	5,362	17,919	1,932	50	.....	97	2,000	8,500	675	36,535	642	1,958	967	585
5	Aurora, York	1,801	438,874	8,432	4 68	19.2	362	9,028	315	597	.....	.....	5,590	....	77	15,969	305	1,617	296	6
6	Aylmer, Elgin	2,204	701,410	17,720	8 04	25 3	....	17,213	989	53	....	47	8,925	9,150	8	36,385	704	3,578	504	240
7	Barrie, Simcoe	6,014	1,536,938	38,428	6 39	25.0	...	42,069	3,089	14,629	7,088	3,010	6,217	35,000	4,297	115,399	1,315	17,713	1,511	1,340
8	Berlin, Waterloo	9,696	3,319,545	60,346	6 22	18.2	.....	60,155	3,189	8,008	....	314	17,104	43,910	3,879	136,559	3,226	11,988	2,773	800
9	Blenheim, Kent	1,676	429,085	9,316	5 56	21.7	190	8,688	1,187	.....	.....	.....	9,850	.....	298	20,213	684	1,471	843	8
10	Bothwell, Kent	900	216,995	4,226	4 70	19.5	599	4,958	1,073	428	....	.....	2,992	7,750	746	18,556	992	538	570	50
11	Bowmanville, Durham	2,843	1,090,160	21,488	7 56	19.7	252	29,865	1,282	28	.....	.....	36,485	....	868	68,780	1,035	3,969	908	1,256
12	Bracebridge, Muskoka	2,304	415,310	8,023	3 48	19.3	1,644	9,212	633	5,434	2,430	580	2,326	5,000	1,966	29,225	1,339	1,901	1,594	340

No.	Disbursements, 1899.—*Continued.*										Assets on December 31, 1899.						Liabilities on December 31, 1899.				
	Streets, bridges and parks.	Construction of buildings, waterworks, etc.	Charities.	County levy.	Payment on account of schools and education.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Waterworks, gas and electric light plant.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
121	261	....	1	132	675	....	.....	.....	165	30	1,605	51	687	1,500	.....	2,000	4,238	....	3,000	....	.....	3,000
122	617	.....	6	269	1,114	....	455	300	197	35	3,348	220	190	.....	.....	3,350	3,760	.....	3,317	329	.....	3,646
123	557	829	23	407	1,352	.....	385	.....	651	70	5,241	798	2,077	5,000	.....	4,950	12,825	1,989	13,399	....	138	15,526
124	206	..	12	.....	475	91	.....	80	152	...	1,246	560	1,021	364	.....	1,500	3,445	583	3,000	125	12	3,720
125	92	468	2	105	660	.....	.....	.....	18	30	1,539	196	202	.....	.....	1,061	1,459	694	..	.....	90	784
126	535	.....	48	242	819	.....	.....	.....	.....	63	1,957	515	929	.....	.....	1,002	2,446	.....	.....	.....	.....	.....
127	1,506	....	57	674	2,022	....	1,336	1,019	361	226	7,734	7	151	.....	.....	1,000	1,158	....	10,714	.....	241	10,955
128	1,251	....	51	294	2,300	500	1,086	3,700	706	200	11,284	212	222	200	.....	6,784	7,418	....	11,920	....	3	11,923
129	122	.....	98	227	646	..	325	.....	180	205	2,064	284	377	.....	267	1,030	1,958	206	1,800	1,550	.....	3,556
130	907	1,035	172	502	1,855	.....	338	.....	325	268	5,984	7,815	543	.....	860	6,781	15,999	1,396	17,951	....	3,094	22,441
131	492	14	9	221	1,397	.....	766	1,475	579	155	5,602	888	..	.....	.....	4,204	5,092	.....	9,498	702	564	10,764
132	521	...	5	197	711	.....	250	400	435	33	2,890	354	443	3,554	.....	3,121	7,472	....	6,418	854	6	7,278
133	599	.....	41	201	505	.....	.....	350	6	128	2,099	45	84	.....	.....	850	979	176	.....	.....	307	483
134	270	.....	15	.....	413	587	.....	75	240	120	1,934	164	259	3,786	.....	3,679	7,888	.....	4,000	75	.....	4,075
135	1,130	.....	186	176	1,545	.....	315	1,300	116	131	5,458	.....	90	.....	.....	1,450	1,540	.....	534	106	.....	640
1	478		24	524	1,387	1,619	698	.....	2,333	202	9,228	914	1,492	9,509	19,341	11,111	42,367	1,852	52,872	.....	...	54,724
2	2,022	188	141	1,550	8,159	.....	2,800	7,125	2,310	222	28,680	438	403	.....	.....	59,300	60,141	.....	44,300	.....	50	44,350
3	6,763	7,273	277	450	3,052	.....	1,925	45,666	4,228	341	74,463	296	8,396	.....	43,500	15,360	67,552	3,375	64,807	23,196	300	91,678
4	7,413	..	38	2,001	9,830	549	1,246	5,000	2,195	597	33,006	3,529	6,162	33,544	.....	27,644	70,879	4,370	49,398	..	325	54,093
5	1,225	.....	.....	777	3,000	.. ..	1,236	5,890	1,421	76	15,549	420	1,532	200	16,800	10,000	28,952	1,000	23,221	1,590	114	25,925
6	5,152	1,153	93	903	4,407		3,584	12 368	1,647	1,864	36,197	188	1,170	.....	17,000	15,677	34,035	....	35,916	.....	287	36,203
7	4,489	32,277	473	2,356	15,395	14,764	7,562	5.612	9,088	1,504	115,399	..	7,417	16,445	129,909	50,025	203,796	3,871	220,942	6,217	5,970	237,000
8	25,435	17,872	1,212	3 600	24,430	.....	8,808	22,990	11,889	1,536	136,559	.....	2,601	5,000	123,000	202,604	333,205	...	288,110	17,104	6,467	311,681
9	2,866	.....	37	650	2,772	.....	1,448	7,875	1,100	172	19,926	287	5,415	.....	.....	23.350	29,052	604	21,553	5,800	802	28,759
10	1,316	6,602	70	256	1,693	.....	577	4,001	281	413	17,358	1,198	1,666	.....	6,000	8,737	17,601	...	7,273	...	.....	7,273
11	4,371	1,731	548	1,022	5,960	....	1,466	41,585	3,973	905	68,729	51	2,567	.....	.....	24,330	26,948	....	73,613	5,800	...	79,413
12	2,915	3,582	131	.....	2,647	4,229	1,403	5,700	2,761	191	28,733	492	1,835	10,127	44,500	12,460	69,414	1,000	53,235	326	30	54,591

TOWN MUNICIPALITIES, 1899-1900.—*Continued.*

No.	Town Municipalities and Counties in which located.	Population, 1900	Assessed values of real and personal property and income taxable, 1900.	Taxes imposed for all purposes, 1900. Total.	Per head.	Mills on $.	Receipts, 1899. Balance from 1898.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water, gas and electric light rates.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.	Disbursements, 1899. Allowances, salaries and commission.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Administration of justice, including police service.
			$	$	c.		$	$	$	$	$	$	$	$	$	$	$	$	$	$
13	Brampton, Peel	2,813	960,870	19,407	6 89	20.2	701	19,281	843	3,720	.....	25	8,597	14,898	1,736	49,801	988	2,141	1,600	422
14	Brockville, Leeds	8,915	3,394,758	82,471	9 22	24 2	577	78,379	8,447	25,766	3,650	4,178	163,648	69,686	2,125	356,426	3,772	20,074	3,270	7,967
15	Carleton Place, Lanark	4,022	892,545	21,441	5 33	24 0	6,322	19,734	2,332	.....	.....	57	7,700	1,100	72	37,317	1,320	2,228	690	450
16	Clinton, Huron	2,433	632,587	13,740	5 64	21.7	10,219	18,120	1,133	.....	.....	246	1,800	.....	428	31,946	846	1,456	739	227
17	Cobourg, Northumberland	4,200	1,458,954	33,289	7 92	22 8	.....	30,645	7,467	.....	.....	.....	20,000	147,416	6,919	212,447	2,896	5,683	3,790	1,577
18	Collingwood, Simcoe	5,587	1,320,705	33,425	5 98	25 3	3,376	30,891	3,501	8,902	.....	100	16,100	10,300	1,051	74,221	1,656	7,724	3,167	900
19	Copper Cliff, Nipissing	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20	Cornwall, Stormont	6,190	1,735,825	40,466	6 53	23.3	.....	25,190	4,084	.....	.....	177	11,987	41,630	2,286	85,354	1,833	7,120	3,332	2,631
21	Deseronto, Hastings	3,786	703,905	20,413	5 39	28.9	965	19,619	1,030	1,146	584	128	109	.....	225	23,806	419	1,922	551	700
22	Dresden, Kent	1,684	403,530	8,156	5 14	20.2	.....	9,758	855	.....	.....	.....	7,812	8,000	300	26,725	439	2,008	385	456
23	Dundas, Wentworth	3,417	951,095	22,077	6 46	23 2	4,547	18,034	1,376	1,409	.....	1,503	3,319	15,800	573	46,561	1,275	2,449	1,667	894
24	Dunnville, Haldimand	2,116	624,756	14,222	6 72	22.7	.....	10,640	665	1,047	.....	.....	5 487	5,000	98	22,937	580	3,035	612	350
25	Durham, Grey	1,325	315,419	6,783	5 11	21 1	5,269	6,584	162	.....	.....	230	2,180	7,044	276	22,145	481	335	178	.....
26	Essex, Essex	1,407	381,539	10,926	7 76	28.6	120	12,336	285	1,534	.....	.....	3,500	.....	.....	17,775	408	2,008	516	119
27	Forest, Lambton	1,574	329,527	8,523	5 41	25.8	861	8,738	465	.....	450	.....	9,494	5,383	174	25,565	324	1,027	493	281
28	Fort William, Thunder Bay	4,298	1,346,341	41,415	9 63	30.7	714	29,666	3,376	7,183	6,034	1,482	104,288	41,000	6 533	200,276	1,864	11,329	4,187	1,401
29	Galt, Waterloo	7,746	2,853,030	52,467	6 77	18.3	.....	51,770	7,010	7,998	46,158	4,043	2,584	36,193	2,290	158,046	4,334	9,151	5,395	823
30	Gananoque, Leeds	4,009	1,080,223	20,600	5 13	19.0	1,169	21,475	1,796	.....	.....	425	14,500	.....	166	39,531	757	3,400	933	1,380
31	Goderich, Huron	4,054	1,188,965	28,072	6 92	23 6	2,875	28,549	811	8,070	.....	1,844	145,500	25,000	1,693	214,342	2,058	7,470	2,168	432
32	Gore Bay, Manitoulin	733	122,515	3,054	4 16	24.9	148	3,350	91	.....	.....	59	225	.....	20	3,893	144	227	338	208
33	Gravenhurst, Muskoka	2,377	326,206	11,581	4 87	35 5	1,589	13,952	365	.....	.....	280	8,000	.....	52	24,238	949	968	311	400
34	Harriston, Wellington	1,756	450,700	9,900	5 63	21.9	1,208	11,595	1,099	.....	.....	.....	6,900	3,680	418	24,900	790	1,884	325	202
35	Hawkesbury, Prescott	3,449	223,150	8,431	2 44	37.7	387	7,775	378	.....	.....	.....	2,700	7,500	54	18,794	306	99	120	300
36	Hespeler, Waterloo	2,555	587,925	9,942	3 89	16.9	322	8,170	173	.....	.....	18	8,350	.....	198	17,231	370	1,039	545	250
37	Huntsville, Muskoka	1,918	350,779	8,627	4 49	24 5	184	9,098	539	3,416	100	18	7,000	.....	39	20,394	905	3,028	566	75
38	Ingersoll, Oxford	4,726	1,424,660	32,909	6 96	23.0	1	35,160	3,716	.....	843	819	22,270	.....	544	63,353	1,414	5,978	1,101	1,024
39	Kincardine, Bruce	2,095	619,943	16,433	7 84	26.5	1,900	14,753	782	4,165	3,471	520	8,000	.....	1,116	34,757	602	5,002	929	350
40	Kingsville, Essex	1,369	371,651	6 857	5 00	18.4	811	10,037	318	6,898	.....	.....	.....	.....	203	18,267	851	1,031	283	25
41	Leamington, Essex	3,065	645,460	10,338	3 37	16 0	457	9,012	606	13,409	.....	.....	42,337	.....	811	66,632	596	2,292	832	166
42	Lindsay, Victoria	7,405	1,961,060	53,679	7 24	27.3	572	51,709	3,236	.....	941	1,081	25,700	23,000	793	107,032	3,651	7,668	2,779	2,054
43	Listowel, Perth	2,517	781,480	17,039	6 76	21.8	.....	17,528	805	.....	.....	208	1,677	19,382	556	40,156	988	2,227	597	235

No.	Disbursements, 1899.—*Continued.*										Assets on December 31, 1899.						Liabilities on December 31, 1899.				
	Streets, bridges and parks.	Construction of buildings, water works, etc.	Charities.	County levy.	Payment on account of schools and education.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Waterworks, gas and electric light plant.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
13	5,623	1,171	357	1,207	6,200	.....	7,242	11,800	7,592	972	47,315	2,486	2,319	20 000	120,000	14,508	159,313	4,100	148,095	2,797	.....	154,992
14	36,640	10,724	1,377	.....	21,665	23,917	617	196,445	23,651	6,033	356,152	274	30,455	113,902	180,480	178,132	503,243	.....	547,140	24,462	.....	571,602
15	1,524	183	180	1,681	5,200	.....	2,600	8,500	2,990	862	28,403	8,914	.....	3,500	.....	54,383	66,797	5,000	64,300	3,700	.....	73,000
16	1,668	3,312	97	596	4,500	2,058	.....	1,800	1,752	691	19,682	12,264	709	32,451	.....	24,500	69,927	610	54,500	.....	5,733	60,843
17	7,827	5,201	525	1,375	12,314	.....	146,769	11,633	10,858	1,751	212,194	253	11,179	.....	.....	158,616	170,048	1,418	206,563	13,500	441	221,922
18	4,610	2,866	793	.....	10,039	476	8,824	16,100	12,509	2,383	72,047	2,174	560	3,820	111,292	90,855	208,701	2,825	239,166	.....	793	242,784
19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20	14,533	6,343	1,018	1,733	10,202	935	8,454	16,057	8,477	2,686	85,354	.....	37,100	17,315	94,000	49,804	197,719	12,390	260,490	12,678	.....	285,558
21	1,878	4,116	102	1,183	6,598	.....	1,784	.....	3,030	1,523	23,806	.....	1,119	.....	41,444	8,366	50,929	.....	67,755	109	563	68,427
22	1,090	.....	339	.....	2,981	.....	2,039	15,928	866	144	26,725	.....	2,326	.....	.....	35,950	38,276	557	19,776	412	.....	20,745
23	2,070	1,102	524	1,919	5,395	5,961	2,149	1,500	4,068	13,399	44,312	2,249	19 644	21,522	45,454	79,414	168,288	.....	82,749	3,319	75	86,143
24	5,448	.....	606	1,440	3,700	.....	771	4,775	955	665	22,937	.....	8,822	.....	13,566	8,805	31,127	3,000	14,785	5,487	635	23,907
25	3,576	.....	108	360	1,768	650	1,448	6,273	1,568	515	17,260	4,885	174	1,112	.....	7,100	13,271	.....	27,919	144	102	28,165
26	624	.....	35	404	2,148	.....	2,124	6,100	2,907	370	17,763	12	4,300	.....	32,931	5,907	43,150	2,838	44,955	3,900	656	52,348
27	6,827	.....	223	372	3,000	450	650	9,544	278	863	24,332	1,233	233	.....	.....	16,050	17,516	.....	13,858	600	.....	14,458
28	7,796	42,335	374	.....	16,217	14,216	.....	56,033	9,697	32,571	198,020	2,256	22,864	37,373	51,270	129,109	242,872	1,011	183,253	111,026	1,907	297,197
29	23,577	1,715	1,265	3,536	18,968	9,425	45,000	19,233	13,945	1,679	158,046	.....	4,513	42,044	152,000	69,132	268,189	.....	257,719	2,584	1,896	262,199
30	2,714	.....	127	1,331	6,500	2,585	.....	14,500	3,108	904	37,739	1,792	1,328	16,690	30,000	30,622	80,432	.....	66,536	4,500	380	71,416
31	4,374	3,818	246	985	7,827	8,033	1,222	156,500	10,740	1,006	206 879	7,463	5,997	68,563	107,001	56,675	245,699	.....	169,513	49,000	.....	218,513
32	32	425	13	.....	1,558	98	.....	256	206	93	3,598	295	1,210	1,363	.....	2,154	5,022	693	1,850	969	164	3,676
33	1,114	20	203	.....	4,579	.....	1,540	7,209	1,928	4 484	23,705	533	5,720	.....	.....	11,632	17,885	2,694	25,549	5,900	266	34,409
34	3,189	259	18	723	3,738	.....	2,924	6,052	1,383	772	22,209	2,691	2,884	.....	.....	13,000	18,575	1,002	30,826	2,805	.....	34,633
35	1,372	279	.....	670	3,893	.....	.....	2,960	154	7,723	17,876	918	2,970	.....	.....	479	4,367	1,293	7,560	1,799	45	10,637
36	1,507	.....	30	626	3,026	.....	815	8,050	548	153	16,959	272	540	.....	.....	11,978	12,790	.....	7,915	1,700	241	9,856
37	1,233	1,202	34	.....	3,247	.....	983	6,613	1,825	514	20,226	169	1,533	.....	35,844	1,685	39,231	2,400	31,963	3,800	19	38,182
38	17,476	100	484	2,325	10,996	4,908	92	6,986	5,301	5,168	63,353	.....	8,694	45,784	.....	74,766	129,244	.....	151,046	22,270	.....	173,316
39	1,685	.....	269	791	5,363	4,978	1,162	8,060	3,428	1,295	33,854	903	8,261	14,759	55,918	34,800	114,641	3,480	75,211	2,555	262	81,508
40	413	3,768	22	319	1,790	.....	5,060	.....	2,835	652	17,049	1,218	4,023	.....	50,000	11,384	66,625	1,413	46,217	3,400	969	51,999
41	4,626	5,971	541	1,045	4,510	.....	3,472	36,834	4,910	637	66,632	.....	5,735	.....	50,000	38,652	94,387	4,576	82,909	19,676	261	107,422
42	21,486	1,505	1,091	2,998	13,928	24,593	3,018	10,124	9,917	1,590	106,399	633	16,124	45,488	.....	60,244	122,409	2,622	211,229	26,300	2,701	242,852
43	1,245	793	135	685	4,140	1,885	13,214	6,722	4,967	799	38,632	1,524	1,983	5,558	8,000	11,475	28,540	400	101,073	1,677	972	104,122

TOWN MUNICIPALITIES, 1899-1900.—*Continued.*

No.	Town Municipalities and Counties in which located.	Population, 1900.	Taxes imposed for all purposes, 1900.			Receipts, 1899.										Disbursements, 1899.			
			Assessed values of real and personal property and income taxable, 1900.	Total.	Per head	Mills on $.	Balance from 1898.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water, gas and electric light rates.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Administration of justice, including police service.
			$	$	$		$	$	$	$	$	$	$	$	$	$	$	$	$	$
44	Little Current, Manitoulin	525	108,795	1,988	3 79	18 3	570	1,843	114	.....	.....	.....	.....	.....	.....	2,527	186	.....	77	27
45	Mattawa, Nipis ing	1,096	268,664	5,869	5 36	21 8	58	4,107	921	.....	973	.....	2,834	25,000	28	33,921	579	596	676	577
46	Meaford, Grey	1,889	540,574	13,517	7 16	25.0	1,389	10,065	824	1,151	.....	.....	9,075	.....	131	22,635	1,273	1,338	1,388	54
47	Midland, Simcoe	2,647	544,495	13,700	5 17	25.2	25,235	12,878	845	.....	.....	67	13,800	.....	86	52,911	546	1,681	459	293
48	Milton, Halton	1,280	413,314	7,593	5 93	18 4	3,466	7,167	495	945	660	334	200	.....	7	13,274	581	1,139	405	149
49	Mitchell, Perth	2,088	681,615	14,379	6 89	21 1	5	14,188	946	1,955	.....	.....	40,775	7,026	580	65,475	1,064	3,761	348	602
50	Mount Forest, Wellington	2,180	631,630	14,527	6 66	23.0	295	14,734	1,064	1,695	2,750	624	60,000	14,587	524	96,273	725	3,143	566	71
51	Napanee, Lennox and Add	2,940	999,293	25,350	8 62	25.4	213	29,744	2,160	25	.....	26	1,500	20,000	261	53,929	1,433	3,859	924	708
52	Newmarket, York	2,296	514,835	11,596	5 05	22.5	1,185	11,409	770	5,369	834	143	2,467	5,000	223	27,400	756	4,521	442	31
53	Niagara, Lincoln	1,230	503,410	10,157	8 26	20.2	54	11,367	959	3,370	.....	.....	6,200	.....	94	22,644	838	3,615	747	531
54	Niagara Falls, Welland	4,078	2,098,316	44,225	10 84	21.8	6,518	45,690	1,467	8,397	.....	1,402	87,026	71,000	5,584	227,084	4,794	13,754	3,473	1,682
55	North Toronto, York	1,765	852,545	18,134	10 28	21.3	211	18,656	459	1,621	2,164	487	13,550	.....	2,872	40,020	1,350	3,827	942	400
56	North Bay, Nipissing	2,337	448,643	15,200	6 50	33 9	249	11,176	1,158	3,267	.....	227	6 800	4,500	282	27,659	640	3,790	642	939
57	Oakville, Halton	1,704	456,427	10,262	6 02	22.5	478	11,283	499	.....	.....	360	4,000	.....	134	16,754	422	1,639	244	350
58	Orangeville, Dufferin	4,076	765,680	19,126	4 69	25 0	16	20,540	1,371	1,447	4,075	516	8,000	26,801	592	63,358	755	2,601	2,825	600
59	Orillia, Simcoe	4,667	1,381,180	31,409	6 73	22.7	5,645	29,251	2,349	11,187	.....	572	15,000	45,676	4,761	114,441	2,772	6,895	1,415	713
60	Oshawa, Ont	4,464	1,099,370	24,148	5 41	22.0	.....	22,121	1,168	.....	.....	.....	3,860	.....	283	27,432	904	2,755	1,076	690
61	Owen Sound, Grey	8,854	2,660,935	67,883	7 67	25.5	17,488	59,180	3,001	9,342	1,483	2,341	25,008	48,441	6,170	172,454	2,990	9,589	2,559	3,255
62	Palmerston, Wellington	1,784	458,315	11,678	6 55	25.5	1,138	10,165	469	.....	.....	31	10,100	26,032	237	48,172	930	376	97	419
63	Paris, Brant	3,311	1,044,450	22,154	6 69	21.2	267	19,094	964	3,965	500	328	13,039	11,000	498	49,655	2,235	6,111	759	805
64	Parkhill, Middlesex	1,401	350,620	6 847	4 89	19.5	1,375	7,145	631	.....	.....	148	2,700	.....	337	12,336	299	719	561	212
65	Parry Sound, Parry Sound	2,559	421,577	13,622	5 32	32.3	15	16,602	736	1,698	.....	143	18,700	.....	91	37,985	670	2,209	451	452
66	Pembroke, Renfrew	5,015	1,175,850	27,657	5 51	23 6	508	26,644	2,339	5,184	.....	502	8,121	17,000	727	61,028	1,605	2,875	1,042	350
67	Penetanguishene, Simcoe	2,991	486,965	11,585	4 85	23.8	1,966	9,909	872	2,035	.....	32	1,000	.....	268	16,082	626	1,069	497	325
68	Perth, Lanark	3,698	1,277,960	23,878	6 46	18.7	4,914	27,985	2,081	.....	.....	57	.....	5,000	130	40,167	854	4,118	1,807	757
69	Peterborough, Peterborough	10,879	4,393,395	76,741	7 05	17.5	1,416	75,917	11,619	.....	9,500	2,959	32,442	35,884	1,521	171,058	4,005	15,401	2,807	5,901
70	Petrolea, Lambton	4,336	1,239,745	38,175	8 80	30.8	.....	43,694	2,807	18,820	.....	4	58,051	.....	786	124,162	2,807	16,019	2,236	1,368
71	Picton, Prince Edward	3,602	1,247,405	24,457	6 79	19.0	327	22,740	1,992	4,182	.....	28	1,937	.....	14	31,220	821	4,616	1,496	1,379
72	Port Arthur, Thunder Bay	2,799	1,079,913	30,337	10 84	28.1	1,519	42,650	2,915	14,391	3,025	444	24,489	3,475	3,653	96,561	1,465	2,397	2,290	855
73	Port Hope, Durham	4,479	1,445,150	28,415	6 34	19.7	258	27,672	5,693	2,486	476	695	38,000	.....	299	74,979	2,803	5,154	762	450
74	Prescott, Grenville	2,807	873,790	22,537	8 03	25.8	1,379	18,979	2,763	2,103	1,036	1,910	5,207	100,000	3,987	137,364	1,575	4,422	767	760

No.	Disbursements, 1899.—*Continued.*										Assets on December 31, 1899.						Liabilities on 31 December, 1899.				
	Streets, bridges and parks.	Construction of buildings, waterworks, etc.	Charities.	County levy.	Payment on account of schools and education.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Waterworks, gas and electric light plant.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
44	525	.....	40	....	1,225	....	176	....	158	102	2 516	11	607	.....	.....	2,590	3,208	.....	2,431	....	31	2,462
45	1,491	.....	30	...	3,584	4,000	15,442	4,512	1,743	510	33,740	181	9,776	4,000	.....	11,032	24,989	2,588	28,999	2,000	....	33,587
46	1,486	291	82	839	3,790	.....	1,608	8,175	1,845	359	22,528	107	1,067	....	20,000	26,722	47 896	.....	29,989	2,500	...	32,489
47	3,047	.....	231	655	4,395	....	1,740	8,800	2,291	25,660	49,798	3,113	1,156	....	.....	12,140	16,409	....	38,362	5,000	...	43,362
48	770	.....	20	404	800	774	1,592	200	2,168	17	9,019	4,255	1,653	3,304	23,640	8,420	41,272	1,255	41,469	....	....	42,724
49	2,939	290	97	876	4,938	....	1,263	46,805	1,983	452	65,412	63	205	....	24,000	14,836	32,104	870	39,686	1,760	797	43,053
50	9,624	3,009	165	1,377	4,681	1,453	3,377	62,000	4,534	186	94,711	1,762	211	10,452	32,000	5,000	53,225	....	103,209	....	879	104,088
51	4,220	476	482	2 100	7,400	.....	22,324	.....	3,911	1,492	49,329	4,600	14,557	....	....	22,571	41,728	8,050	64,129	1,500	11	73,690
52	975	.....	62	795	3,675	145	3,630	2,467	3,482	5,345	26 329	1,074	561	1,306	40,250	20,850	64,041	2,339	57,124	....	....	59,463
53	1,454	382	.	1,520	2,523	.....	1,623	5,500	2 730	465	21,928	116	2,526	....	51,500	22,128	76,270	1,513	44,129	8,500	363	54,505
54	24,768	47,316	814	....	10,800	.....	7,747	69,686	12,054	2,137	199,019	28,065	13,099	....	194,150	197,988	433,302	....	281,756	35,795	25,375	342,926
55	2,619	.....	176	...	3,306	2,725	2 055	13,200	4,195	5,199	39,994	26	13,817	15,060	45,69	17,685	92,279	....	76 694	6,050	4,142	86 887
56	3,101	.....	136	...	8,771	.....	689	4,979	1,532	614	25,833	1,826	10,256	....	47,720	5,378	65,180	3,681	57,965	5,800	8	67,454
57	816	146	168	531	3,905	1,131	.....	4,000	2,416	279	16,047	707	2,746	12,263	.....	29,008	44,724	2,138	25,500	3,029	....	30,667
58	3,944	441	111	2,246	5,365	5,004	16,378	16.580	5,444	513	62,807	551	3,968	0,333	47,329	19,085	81,266	3,535	121,706	....	1,212	126,453
59	4,066	18,490	365	1,253	16,420	.....	8,948	15,000	7,661	513	84,511	29,930	9,650	....	103,099	50,801	193,480	11,186	180,645	....	4,300	196,131
60	5,141	....	871	1,124	9,008	.....	1,516	1,725	1,823	769	27,432	....	3,677	....	.....	17,815	21,492	....	35,010	3,860	....	38,870
61	28,274	5,603	1,060	2,952	20,248	26,405	26,468	3,000	23,848	859	157,020	15,434	35,323	96,055	115,949	120,897	383,658	19,996	498,237	40,123	785	559,141
62	934	1,032	33	700	2,712	25,422	2,816	8,050	3,651	980	48,146	26	4,006	26,267	.....	7,628	37,927	....	88,611	4,050	.....	92,661
63	10,835	2,368	525	1,325	4,816	750	1,812	13,000	2,719	1,571	49,655	....	400	10,000	58,197	54,300	122,897	2,162	51,908	39	.....	54,104
64	869	....	8	475	2,909	584	400	2,700	834	392	10,962	1,374	1,245	4,527	.....	11,298	18,444	411	14,600	....	58	15,069
65	2,076	769	259	....	5,000	....	840	21,700	2,689	418	37,533	452	3,342	....	34,345	7 678	45,817	26	35,448	5,200	61	40,735
66	4,512	13,522	12	2,392	13,728	3,886	4,504	6,642	5,477	481	61,028	....	27,061	4,558	61,140	41,605	134,364	11,716	134,437	1,482	3,193	150,828
67	811	.....	144	638	3,027	32	912	1,000	3,257	1,006	13,374	2,708	7,565	1,639	38,000	15,563	65,475	1,615	65,152	4,575	7,497	68,839
68	6 735	.....	289	775	12,855	....	3,100	.....	1,500	474	33,264	6,903	1,378	....	.....	26,405	34,686	4,467	23,600	....	1,138	29,205
69	34,110	12,098	2,585	....	28,121	20,755	...	32,497	10,289	2,489	171,658	...	9,712	88,585	.....	262 351	360,648	....	286,045	61,308	4,922	352,275
70	7,252	4,434	520	1,101	10,437	....	6,549	66,111	4,497	696	124,027	135	29,028	.....	186,727	57,739	273,629	11,186	215,818	13,640	19,768	260,412
71	5,091	2,944	1,212	...	7,418	....	3,106	.....	2,082	556	36,721	499	2,182	....	49,000	13,564	65,245	5,156	34,738	1,937	211	42,042
72	5,580	2,347	430	....	3,672	12,309	450	29,563	12,854	20,758	94,970	1,591	20,332	27,061	128,269	41,448	218,701	2,432	244,275	31,648	5,924	284,279
73	3,824	2,225	403	1,418	8,130	859	1,435	35,000	11,052	1,318	74,333	646	9,736	18,367	60,154	142 823	281,716	....	230,337	8,300	688	239,275
74	3,897	56,160	461	...	5,613	1,036	800	1,500	1,604	1,607	80,202	57,162	9,759	.....	56,160	56,338	179,419	3,254	131,984	5,207	775	141,220

No.	Town Municipalities and Counties in which located.	Population, 1900.	Assessed values of real and personal property and income taxable, 1900.	Taxes imposed for all purposes, 1900.			Receipts, 1899.										Disbursements, 1899.			
				Total.	Per head.	Mills on $	Balance from 1898.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water, gas and electric light rates.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.	Allowances, salaries and commission.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Administration of justice, including police service.
			$	$	$ c.		$	$	$	$	$	$	$	$	$	$	$	$	$	$
75	Preston, Waterloo	2,280	672,280	10,717	4 70	15.9	181	10,438	470	.. ..	1,000	301	10,700	6,500	852	30,442	506	1,900	682	177
76	Rat Portage, Rainy River	5,454	1,671,098	50,180	9 21	30 0	354	61,671	5,876	15,330	.....	.....	168,661	95,000	6,646	353,538	1,792	12,738	8,212	2,426
77	Renfrew, Renfrew	3,054	1,046,425	21,744	7 12	20.8	1,309	18,779	1,177	4,032	.....	115	15,534	8,400	260	49,606	650	3,181	1,283	525
78	Ridgetown, Kent	2,298	654,929	15,285	6 65	23.3	1,914	11,370	1,370	.....	1,159	16	30,500	2,575	1,592	50,496	549	1,864	369	454
79	St. Marys, Perth	3,327	1,194,325	25,420	7 64	21.3	318	24,627	1,424	.....	.....	1,401	24,271	10,000	2,116	94,157	689	2,314	1,015	837
80	Sandwich, Essex	1,338	440,355	7,893	5 90	17.9	4	7,308	336	1,297	.....	.....	5,778	.....	266	14,990	637	2,695	579	126
81	Sarnia, Lambton	7,734	2,145,575	53,166	6 87	24.8	97	54,693	3,207	3,142	17,276	822	100,588	4,618	1,702	196,145	3,390	18,991	3,973	2,445
82	Sault Ste. Marie, Algoma	4,199	1,933,527	34,503	8 22	12.7	...	37,338	757	.....	.....	15,172	2,542	23,000	1,547	80,366	2,219	11,710	705	711
83	Seaforth, Huron	2,426	623,520	15,055	6 21	24 1	1,196	15,160	1,087	772	1,000	560	7,407	18,000	836	46,018	831	2,435	462	373
84	Simcoe, Norfolk	2,925	924,492	20,985	7 17	22 7	.....	22,177	992	.....	5,644	329	5,294	.....	288	34,724	1,009	3,680	419	517
85	Smith's Falls, Lanark	5,180	1,179,521	24,771	4 78	21 0	6,441	21,144	2,358	.....	.....	.....	14,250	.....	1,239	45,432	1,051	3,881	2,545	569
86	Stayner, Simcoe	1,160	215,910	4,828	4 16	22.4	1,425	4,006	409	95	.....	.....	.....	24,000	2,389	32,324	616	552	405	28
87	Strathroy, Middlesex	3,001	950,050	19,850	6 61	20.9	804	21,329	1,122	.....	.....	.....	19,808	.....	344	43,407	1,117	2,365	562	417
88	Sturgeon Falls, Nipissing	1,617	280,676	5,381	3 33	19.2	1,456	3,485	903	.....	.....	.....	700	6,566	.....	13,110	228	117	193	18
89	Sudbury, Nipissing	1,524	324,490	9,577	6 28	29.5	587	10,060	1,812	4 570	.....	.....	15,418	.....	737	33,184	929	8,575	670	12
90	Thessalon, Algoma	838	183,525	4,423	5 28	24.1	1,199	5,000	397	938	.....	6	15,562	13,067	 8	36,169	413	1,224	201	14
91	Thornbury, Grey	739	228,625	4,574	6 19	20.0	1,320	3,930	109	.....	.....	.....	600	.....	.....	5,967	312	..	335	50
92	Thorold, Welland	1,897	600,312	15,576	8 21	25 9	594	16,306	605	1,508	.....	.....	7,000	.....	499	26,512	721	3,233	1,499	638
93	Tilsonburg, Oxford	2,074	742,250	17,241	8 31	23.2	5,786	16,204	1,500	.....	1,605	661	2,560	628	649	29,536	688	1,997	665	690
94	Toronto Junction, York	5,756	2,243,165	57,866	10 01	25.8	21,833	61,738	1,540	8,071	.....	404	.....	.....	5,133	98,719	2,525	12,945	5,863	3,316
95	Trenton, Hastings	3,996	1,176,163	27,961	7 00	23 8	948	30,075	1,940	763	.....	381	63,700	10,000	783	108,590	1,711	3,173	2,329	1,493
96	Uxbridge, Ontario	1,684	512,400	11,837	7 03	23.1	76	12,128	725	.....	.....	188	13,000	.....	205	26,322	514	946	374	449
97	Vankleek Hill, Prescott	1,291	424,135	5,104	3 95	12.3	2,065	3,370	568	.....	.....	.....	1,150	.....	.....	7,153	383	1	141	12
98	Walkerton, Bruce	3,116	680,115	17,610	5 65	25.9	.....	15,585	1,433	1,863	139	35	54,000	3,345	1,589	77,989	678	1,370	2,158	364
99	Walkerville, Essex	1,368	1,970,171	29,098	2 13	14 8	8,352	28,748	440	.....	.....	.....	40,500	.....	24	78,064	1,298	3,089	587	1,952
100	Wallaceburg, Kent	2,861	516,335	13,091	4 58	25.4	1,025	12,574	1,283	.....	.....	.....	7,081	.....	486	22,449	1,114	2,766	1,005	476
101	Waterloo, Waterloo	3,571	1,391,090	24,866	6 96	17.9	151	22,396	1,358	.....	564	455	10,464	46,094	3,134	84,616	1,442	4,080	1,760	300
102	Welland, Welland	1,842	633,517	15,451	8 39	24 4	3,144	14,263	663	3,245	25,441	940	.....	1,616	116	49,428	1,351	2,134	1,067	150
103	Whitby, Ontario	2,230	851,386	17,730	7 95	20 8	656	18,816	842	.....	.....	.....	42,005	10,000	706	73,025	1,334	1,625	1,241	230
104	Wiarton, Bruce	2,294	407,825	10,187	4 44	25.0	6,075	10,355	623	2,116	.....	155	9,928	4,000	272	33,524	536	2,330	761	337
105	Wingham, Huron	2,183	567,614	12,833	5 88	22.6	4,380	12,513	1,259	.....	20,563	187	7,500	28,125	903	70,430	684	1,750	414	435

No.	Disbursements, 1899.—*Continued.*											Assets on December 31, 1899.						Liabilities on December 31, 1899.				
	Streets, bridges and parks.	Construction of buildings, water works, etc.	Charities.	County levy.	Payment on account of schools and education.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Waterworks, gas and electric light plant.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
75	6,579	700	....	822	3,830	1,451	2,545	7,700	1,659	848	29,399	1,043	40	6,451	.....	12,708	20,242	1,321	31,591	3,000	....	35,912
76	6,193	87,598	774	....	23,986	4,249	6,263	184,000	10,850	4,380	353,481	57	13,823	4,249	81,388	30,999	130,516	696	176,198	27,661	3,798	208,353
77	5,332	12,240	119	1,127	11,365	56	2,530	5,175	5,123	900	49,606	.....	17,279	2,306	87,332	15,320	122,237	4,558	106,749	15,534	..	126,841
78	997	87	213	863	6,050	1,751	2,512	30,500	3,639	306	50,144	352	3,201	1,830	.....	10,212	15,595	863	66,484	....	....	67,347
79	4,163	26,486	298	....	7,081	15,517	3,818	25,800	3,705	2,434	94,157	.....	2,348	15,517	28,101	37,128	83,094	..	83,283	1,971	3,136	88,390
80	2,166	1,466	221	388	1,977	.....	203	3,613	508	411	14,990	....	6,713	.....	19,056	11,275	37,044	2,612	24,312	5,186	273	32,383
81	15,839	14,736	1,595	2,163	14,918	7,272	14,177	76,306	13,172	1,864	190,841	5,304	25,660	30,201	120,000	73,299	254,104	...	244,022	25,318	4,714	274,054
82	2,541	.....	32	....	6,157	1,080	23,223	9,962	19,445	2,581	80,366	.....	13,341	277,101	.....	24,421	314,863	....	390,847	2,542	12,311	405,700
83	2,722	60	153	577	5,450	19,000	.....	7,407	2,217	1,758	43,645	2,373	1,110	42,900	13,000	17,860	77,183	....	62,000	3,700	....	65,700
84	1,720	814	255	1,891	5,834	449	3,417	9,506	3,704	1,509	34,724	.....	2,259	.....	.....	22,438	24,692	....	74,445	5,294	1,008	80,747
85	8,186	3,199	49	2,053	8,000	....	4,666	1,845	2,988	2,603	41,575	3,857	578	.....	3,000	50,825	58,260	....	55,462	18,047	1,811	75,310
86	1,035	25,729	66	343	1,800	.....	678	.....	975	10	32,237	87	604	.....	25,000	2,604	28,295	1,872	23,572	.....	24	25,468
87	10,280	.....	118	1,267	6,710	....	2,810	14,800	2,381	580	43,407	....	1,430	12,487	.....	15,154	29,071	1,172	35,186	6,017	....	42,375
88	1,193	32	15	....	1,761	.....	478	400	374	7,466	12,275	835	3,739	.....	.....	34	4,698	689	6,088	1,800	1,850	10,427
89	2,003	89	303	....	4,539	.....	3,614	5,941	5,668	256	32,569	615	2,620	.....	56,000	4,669	63,904	.....	45,936	13,477	446	59,859
90	653	13,811	9	....	1,715	106	197	16,050	999	522	35,914	255	797	208	13,700	4,017	18,977	....	14,870	1,561	208	16,639
91	602	.....	3	288	1,468	75	270	600	296	100	4,448	1,519	376	962	.....	1,600	4,447	1,628	5,327	....	27	6,982
92	1,305	.....	192	1,891	5,666	.....	1,345	5,000	2,190	1,244	24,924	1,588	4,140	.....	17,000	18,500	41,228	3,232	12,523	2,000	966	18,721
93	902	462	222	1,196	4,810	3,303	1,325	2,500	4,779	436	23,976	5,560	632	19,068	33,500	23,710	82,470	....	96,192	....	....	96,192
94	6,318	258	386	....	15,240	.....	.....	4,000	11,127	4,734	66,712	32,407	45,865	.....	174,000	527,010	778,882	10,016	1,067,650	5,080	4,886	1,087,632
95	2,974	900	868	....	7,472	1,257	515	63,300	7,889	13,391	107,272	1,318	31,831	8,190	15,000	127,379	183,718	.....	147,281	12,400	5,040	164,721
96	1,570	321	282	566	3,600	1,360	.....	12,700	2,387	1,208	26,277	45	3,387	7,927	10,000	14,805	36,164	....	39,900	3,097	154	43,151
97	135	....	13	....	3,437	.....	101	450	130	1,712	6,515	638	708	.....	.....	750	2,096	1,500	2,899	700	6,543	11,642
98	5,464	2,066	78	869	5,348	327	2,188	51,617	4,408	684	77,619	370	10,602	28,221	35,000	36,825	111,018	....	103,918	15,400	2,174	121,492
99	4 887	....	45	....	3,340	.....	7,527	40,500	2,583	1,145	66,903	11,161	355	.....	.....	45,481	56,997	..	40,076	....	1,132	41,208
100	3,017	.....	203	....	5,337	.....	4,028	325	2,860	1,318	22,449	.....	9,291	.....	.....	16,550	25,841	684	43,118	20,667	.....	64,469
101	7,553	41,458	1,555	1,609	5,704	248	2,496	12,500	3,178	823	84,616	....	838	1,008	40,000	71,305	113,151	6,000	105,384	1,964	5,206	118,554
102	2,717	1,834	52	892	4,650	1,678	26,553	.....	4,281	706	48,365	1,063	5,140	11,294	57,036	21,113	95,646	2,500	62,259	....	45	64,804
103	2,073	....	188	804	6,725	.....	10,742	44,300	3,506	221	72,989	36	18,369	.....	4,000	23,592	45,997	....	61,243	13,055	555	74,853
104	966	4,734	30	318	3,547	.....	1,088	14,500	3,467	910	33,524	.....	1,518	8,000	28,500	7,045	45,063	374	57,650	3,428	25	61,477
105	2,999	8,393	47	399	3,350	10,660	20,572	15,351	3,168	756	68,978	1,452	1,103	10,225	19,700	19,322	51,802	.....	77,126	.....	2,705	79,831

STATISTICS OF CITY MUNICIPALITIES OF ONTARIO.

POPULATION, AREA, ASSESSMENT AND TAXATION, 1900.

RECEIPTS, DISBURSEMENTS, ASSETS AND LIABILITIES, 1899.

No.	City Municipalities and Counties in which located.	Population taken in 1900.	Assessed values of real and personal property and income taxable for 1900.	Taxes imposed for all purposes, 1900.			Receipts, 1899.						Disbursements, 1899.		
				Total.	Per head.	Mills on $.	Municipal and school taxes.	Licenses, fees, rents, fines, water and electric light rates, etc.	Refunds from Sinking funds and other investments: interest and dividends.	Borrowed for current expenses and debentures.	Miscellaneous, including balance from 1898.	Total receipts.	Lighting of streets, water supply and fire protection.	Salaries of officers, and other expenses of civic government.	Administration of justice, including police service.
			$	$	$ c.		$	$	$	$	$	$	$	$	$
1	Belleville..... Hastings ..	10,313	3,913,171	93,741	9 09	23.9	78,375	11,596	5,890	282,353	15,871	394,085	23,147	10,709	5,476
2	Brantford ..... Brant	16,276	7,271,025	136,414	8 38	18.8	132,116	38,556	15,033	87,992	10,064	283,761	43,329	13,185	7,300
3	Chatham ..... Kent	8,777	3,603,695	104,217	11 87	28.9	95,704	17,080	1,827	139,760	9,994	264,365	16,832	8,636	6,666
4	Guelph..... Wellington.	11,087	3,783,780	99,970	9 02	26.4	96,483	20,167	10,473	8,993	6,329	142,445	17,223	6,419	7,442
5	Hamilton ..... Wentworth.	52,665	26,866,986	536,862	10 19	20.0	538,930	229,728	24,458	208,076	38,459	1,039,651	71,801	55,875	67,139
6	Kingston..... Frontenac..	18,167	7,596,560	149,399	8 22	19.7	151,056	43,612	4,835	83,490	26,103	309,096	27,788	17,483	14,776
7	London ..... Middlesex .	39,059	16,907,889	430,107	11 01	25.4	404,118	113,501	123,734	404,792	70,287	1,116,432	77,188	46,858	47,688
8	Ottawa..... Carleton ...	58,193	24,482,600	578,133	9 93	23.6	538,194	228,399	246,769	1,021,725	35,244	2,070,331	112,411	52,528	50,002
9	St. Catharines. Lincoln	10,361	4,479,485	96,529	9 32	21.5	102,892	35,022	30,119	57,954	4,822	230,809	28,957	9,846	5,693
10	St. Thomas.... Elgin	11,908	4,525,666	113,053	9 49	25.0	111,194	22,169	4,123	238,415	16,756	392,657	24,100	12,728	4,285
11	Stratford..... Perth	10,758	4,039,175	101,113	9 40	25.0	98,407	3,931	49,841	96,801	3,176	252,156	13,225	7,023	4,155
12	Toronto ..... York	199,043	126,795,699	2,903,080	14 59	22.9	2,723,792	845,074	2,053,368	1,872,933	822,585	8,317,752	468,818	224,168	319,564
13	Windsor .... Essex	12,129	5,318,380	148,325	12 23	27.9	147,097	40,689	51,028	81,747	2,358	322,919	31,956	9,137	7,764
14	Woodstock Oxford	9,224	2,765,550	60,635	6 57	21.9	62,569	23,385	8,107	31,172	19,128	144,361	18,903	7,264	2,752

POPULATION, AREA, ASSESSMENT AND TAXATION, 1900.
RECEIPTS, DISBURSEMENTS, ASSETS AND LIABILITIES, 1899.

No.	Disbursements, 1899.—*Continued.*						Assets on December 31, 1899.					Liabilities on December 31, 1899.			
	Streets, bridges, parks, buildings, waterworks and electric light plant.	Payment on account of schools and education.	Sinking Fund and other investments and deposits.	Repayment of debentures, temporary loans and interest.	Board of Health expenses, miscellaneous charities, etc.	Total disbursements	Taxes in arrears.	Sinking Fund and other investments and deposits.	Waterworks, gas and electric light plant	Miscellaneous, including balance on hand.	Total assets.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
1	195,702	17,371	13,493	94,497	* 27,630	388,025	81,625	64,765	180,725	183,269	510,384	447,164	282,353	.....	729,517
2	466,002	30,554	57,804	44,532	15,917	278,623	3,810	324,595	263,768	460,967	1,053,140	976,598	65,618	190	1,042,406
3	30,414	19,918	.....	170,081	8,311	260,861	29,116	1,103	192,000	281,823	504,042	602,803	78,419	3,202	684,424
4	13,239	24,099	19,088	32,080	8,589	128,179	12,808	343,927	116,948	200,446	704,129	610,060	16,000	9,795	635,855
5	207,890	126,271	55,839	328,109	122,161	1,035,085	363,462	353,305	1,752,709	1,886,518	4,355,994	3,584,436	145,067	12,247	3,741,750
6	35,473	36,911	6,130	122,794	5,804	267,159	48,646	55,432	312,189	320,099	766,666	984,026	30,000	22,914	1,036,940
7	201,218	107,374	177,062	416,685	41,435	1,115,508	45,536	1,365,460	786,164	602,829	2,799,989	2,854,481	41,170	75,697	2,971,348
8	307,425	147,516	301,023	1,049,968	48,881	2,069,754	532,638	1,441,896	2,000,000	1,369,777	5,287,311	4,590,068	462,508	* 190,696	5,243,272
9	22,754	23,358	25,573	101,425	11,331	228,917	34,685	195,269	358,907	295,782	884,703	883,016	24,400	8,517	915,933
10	82,146	32,378	4,945	209,321	8,019	377,922	25,053	89,155	152,000	354,573	620,781	576,194	62,855	16,979	656,428
11	45,855	20,750	27,919	118,145	11,826	251,898	27,100	80,579	....	101,608	209,287	459,438	32,031	2,590	494,059
12	1,304,488	198,975	‖1,874,210	3,020,353	192,738	7,903,314	821,668	5,651,452	4,349,385	12,631,186	23,453,691	‡ 22,203,996	289,789	1,253,410	23,747,225
13	21,169	29,018	34,943	177,749	11,066	322,852	50,562	218,902	275,000	231, 67	775,731	780,569	53,225	1 937	835,731
14	22,878	15,943	15,916	37,033	5,348	126,031	10,542	171,802	167,007	93,873	443,224	473,0 5	24,488	8,278	505,781

* Including $20,550 bonus to rolling mills. † Including $33,970 for flood prevention works. § Including $167,859 contractors' guarantee and other special deposits
‖ Including waterworks contractors' deposits, $10,023 and waterworks cash balance, $8,348 * Including $145,000 mortgages on city real estate and $37,992 contractors' guarantee deposits. ‡ Including $100,000 short dated debentures secured by "taxes in arrears."

FINANCIAL STATEMENT.—

Showing abstract statement of Receipts, Disbursements, Assets and Liabilities

No.	Counties.	Receipts, 1899.											
		Balance from 1898.	Rates from local municipalities.	Licenses.	Fees, rents, tolls, fines, etc.	Surplus fees from Registrar.	Interest and dividends.	From Legislature for schools.	From Legislature for Administration of Justice.	Refund moneys loaned or invested.	Money borrowed for current expenses.	Money borrowed on debentures.	Non-resident taxes collected
		$	$	$	$	$	$	$	$	$	$	$	$
1	Brant	9,830	14,861	150	220	29	160	1,932	3,554	.....	.....	.....	189
2	Bruce	6,849	30,504	1,212	148	1 006	85	5,889	2,164	*12,000	6,000	.....	2,831
3	Carleton	.....	24,402	285	736	309	1,064	3,648	5,279	15,000	11,758	....	2,721
4	Dufferin	154	18 455	434	189	.	490	2,884	1,397	.....	7.000	.....	1,599
5	Elgin	19, 805	29,434	490	.....	156	715	4,480	3,624	.....	9,000	40, 000	957
6	Essex	2,064	24,669	190	236	1,100	12	4,036	5,182	.....	13.000	... ..	5,073
7	Frontenac	113	32,048	264	3,274	.	1	3,027	1,851	.....	3 050	.....	1,426
8	Grey	..	34,774	706	72	339	711	6,913	3,798	.....	.....	.....	2,048
9	Haldimand	243	23,091	140	284	.....	...	2,048	2,363	.....	3,400	.....	204
10	Haliburton	1,193	3,665	62	55	.....	.....	2,828	150	.....	4 500	.....	537
11	Halton	3,709	11,992	90	14	.....	60	1,902	1.171	.....	3,000	.....	270
12	Hastings	58	44,089	417	128	396	2,538	4,945	7,029	1,450	35,017	.....	753
13	Huron	594	34,976	1,072	66	1,125	1,136	6,573	1,701	3,995	3,000	.....	321
14	Kent	4,865	31,631	360	2,061	1,013	228	4,066	4,954	19,000	12,589	12, 000	1,278
15	Lambton	6,181	26,395	197	61	1,203	241	4,749	1,877	... ..	10,000	...	5,790
16	Lanark	1,103	18,547	90	46	.....	.....	3,245	1,866	.....	14,097	...	884
17	Leeds and Grenville	123	36,016	312	47	....	468	4,823	3,221	.....	.....	.....	581
18	Lennox and Addington	7,187	28,167	380	122	...	138	2,698	2,433	.....	.....	.....	849
19	Lincoln	4,797	22,751	460	68	155	442	1,696	3.244	.....	.....	.....	877
20	Middlesex	17, 430	64,762	276	37	108	1,985	6,009	7,405	.....	.....	20, 000	1,100
21	Norfolk	.....	25,788	126	132	.....	23	2,961	4,493	.....	.....	.....	1,229
22	Northumberland and Durham	4,832	34,778	642	3	12	92	5,972	3,814	.....	8,000	....	405
23	Ontario	16, 495	19,331	324	6	116	..	3,967	1,964	.....	33,000	.....	720
24	Oxford	25, 089	41,772	483	125	425	414	4,262	1,791	.....	.....	.....	347
25	Peel	80	21,797	240	30	...	5	2,293	2,641	.....	17,104	.....	146
26	Perth	15,775	44,894	473	96	2	227	3,850	2,454	.....	5,500	.....	133
27	Peterborough	1,360	23,833	306	91	.....	205	2,537	2,518	95	13,513	.....	1,365
28	Prescott and Russell	763	13,399	320	62	.....	247	2,418	869	.....	16.007	.....	4,577
29	Prince Edward	4,561	10,315	85	32	.....	37	1,862	2,122	.....	... ...	...	54
30	Renfrew	2,959	18,908	482	113	417	226	5,323	2,821	.....	.....	.....	673
31	Simcoe	3,671	61,657	881	652	1,750	56	7,855	5,940	.....	85,000	... ..	4,563
32	Stormont, Dundas and Glengarry	2,030	21,225	906	54	9	79	6,129	3,254	... ...	4,900	638	1,920
33	Victoria	1,160	23,006	555	203	420	...	3,607	2,760	.....	16,000	....	1,346
34	Waterloo	1,058	29,208	240	67	648	...	2,845	2,421	.....	24.899	.....	41
35	Welland	1,620	26,058	190	36	395	....	2,452	1.759	.....	9,146	....	1,356
36	Wellington	11, 887	54,159	630	167	2	119	4,790	4,243	.....	28,000	.....	332
37	Wentworth	.....	27,000	207	1,320	587	265	3,150	5,041	3,866	.. ...	20,000	815
38	York	.....	57,999	294	613	.....	..	4,897	21,873	.....	40,792	.....	5,208

* Special deposit.

COUNTY MUNICIPALITIES, 1899.

of the county municipalities of Ontario, for the year ending December 31, 1899.

Receipts.—*Continued.*			Disbursements, 1899.									
Towns or cities separated from county, for various services.	Miscellaneous.	Total receipts.	Attendance at meetings of council and committees.	Allowances, salaries and commissions.	Printing, advertising, postage and stationery.	Insurance, heating, lighting and care of buildings.	Law costs (including salaries).	Other expenses.	Roads and bridges.	Grants to local municipalities for roads and bridges.	Buildings and other works.	No.
$	$	$	$	$	$	$	$	$	$	$	$	
3,378	284	34,587	691	1,421	437	1,890	200	173	290	42	1,881	1
.....	*5,023	73,711	1,345	2,606	1,069	988	272	371	3,065	500	.....	2
5,000	650	70,852	1,668	2,908	822	230	888	818	3,063	.....	.....	3
.....	98	32,500	452	1,191	346	225	250	235	1,352	.....	1,916	4
.....	1,242	109,903	819	2,605	423	1,397	158	.....	10,062	128	‡32,172	5
.....	765	56,327	665	2,824	1,029	1,568	100	575	1,731	.....	.....	6
4,453	4,834	54,341	1,085	1,785	442	310	33	702	1,821	.....	.....	7
.....	905	50,266	1,723	2,205	583	1,550	23	255	3,842	1,061	2,789	8
.....	370	32,143	783	1,000	271	692	...	264	766	.....	3,799	9
.....	106	13,096	290	705	98	101	9	38	130	.....	.....	10
.....	2	22,210	223	1,060	417	456	.....	448	699	.....	.....	11
6,860	577	104,251	1,298	3,310	383	425	90	330	16,165	7,611	.....	12
.....	840	55,399	928	3,190	817	1,096	57	58	6,973	.....	.....	13
2,231	‡14,320	110,596	1,828	2,089	323	1,892	645	125	15,334	900	9,524	14
.....	964	57,658	803	2,917	619	1,344	212	184	734	24	913	15
.....	394	40,275	843	1,575	828	684	200	256	399	.....	255	16
.....	.....	45,594	1,064	2,190	889	1,472	67	868	150	.....	2,834	17
.....	44	42,018	802	1,005	630	1,551	55	306	88	.....	.....	18
3,142	1,177	38,809	1,079	1,370	212	1,486	11	303	5,733	.....	350	19
13,999	1,122	134,237	910	2,862	608	552	.....	215	5,753	§140	.....	20
.....	2,406	34,158	719	1,419	474	706	.....	476	549	.....	1,454	21
.....	‖1,477	60,027	1,816	2,135	753	924	210	*a*2,195	375	330	.....	22
.....	1,599	77,522	1,226	1,530	693	1,572	58	286	767	.....	.....	23
.....	1,054	75,762	1,289	3,021	614	962	123	122	3,170	.....	269	24
.....	*b*4,885	49 221	484	1,569	473	458	41	77	2,660	.....	*c*2,544	25
1,289	17	74,710	664	2,218	257	525	.....	183	294	4,961	.....	26
2,887	423	49,133	1,168	1,680	613	1,243	167	117	3,112	1,259	.....	27
.....	645	39,307	653	1,121	515	281	.....	5	381	.....	.....	28
.....	.....	19,068	284	750	486	359	.....	530	530	.....	.....	29
.....	283	32,205	665	1,805	447	728	84	179	681	.....	.....	30
.....	4,999	177,024	2,741	3,790	814	675	551	510	3,247	544	10,786	31
.....	*d*4,127	45,271	723	1,850	462	911	107	513	126	.....	279	32
600	666	50,123	1,090	2,578	1,067	1,023	24	1,427	3,125	375	1,652	33
.....	55	61,482	1,193	1,394	870	1,386	32	154	5,825	24	.....	34
1,453	758	45,223	630	1,380	209	1,341	.....	210	482	117	41	35
3,282	480	108,091	1,569	2,403	623	260	851	729	19,982	2,554	1,915	36
8,537	1,918	72,706	2,003	2,170	654	2,611	40	1,426	7,282	.....	2,031	37
24,424	8,852	164,952	6,332	3,423	1,261	1,496	1,086	4,051	14,024	50	1,263	38

* Including $4,000 Government Grant for House of Refuge.
† New Court House.
‡ Including $4,750 from Bothwell, Orford and Zone, proceeds of their debentures for share of Moravian bridge, and $5,546 from Special Trust Funds.
§ Including $119 to adjoining counties.
‖ Including $1,186 witness fees in Ponton case.
a Including $1,450 for rent paid Cobourg Town Trust.
b Including $4,000 from Government for House of Refuge.
c For House of Refuge.
d Including $4,000 for adjustment of Bills Payable Account.

FINANCIAL STATEMENT.—

Disbursements, 1899.—*Continued.*

No.	Counties.	Support of the poor and other charities.	Administration of Justice, gaol maintenance, etc.	Grants to schools and other payments on education.	Sinking Fund and other investments and deposits	Debentures redeemed.	Interest paid on debentures.	Refund of money borrowed for current expenses.	Interest or discount on loans and advances.	Non-resident taxes paid local municipalities.	Miscellaneous.	Total disbursements.
		$	$	$	$	$	$	$	$	$	$	$
1	Brant	192	9,176	3,475	....	1,628	314	....	....	189	809	22,808
2	Bruce	9,352	8,822	13,180	*12,000	672	800	6,000	85	2,831	2 908	66,866
3	Carleton	2,482	20,892	5,557	3,147	15,000	3,150	5,952	61	2,721	1,493	70,852
4	Dufferin	46	7,222	5,500	664	4,100	1,122	6,230	130	904	496	32,431
5	Elgin	4,228	10,498	10,274	....	1,380	563	24,000	669	826	879	101,021
6	Essex	632	12,849	10,274	....	930	983	10,000	762	5,073	3,646	53,641
7	Frontenac	1,550	9,638	5,908	....	....	4,470	14,743	261	2,649	8,867	54,204
8	Grey	310	14,502	14,225	1,917	....	1,100	....	....	2,239	1 944	50,266
9	Haldimand	207	7,604	9,200	....	....	....	4,965	335	342	500	30,717
10	Haliburton	..	865	3,555	....	1 000	180	6,000	74	537	18	12,600
11	Halton	....	6,087	3,647	....	....	....	3 000	39	....	440	16,466
12	Hastings	125	14,081	11,377	4 810	667	3,338	36,906	1,451	752	1,058	104,177
13	Huron	5,082	9,394	14,519	7,406	....	2,945	995	26	506	509	54,803
14	Kent	3,589	17,107	13,029	19,606	7 965	1,782	10,000	605	2,188	2,480	110,407
15	Lambton	3,553	10,772	13,219	....	605	572	10,000	66	6,823	2 482	55,541
16	Lanark	675	8,756	8 978	....	....	....	13,000	350	887	2,609	40,275
17	Leeds and Grenville	4,857	9,326	12.776	2.010	....	1.325	3.781	614	545	605	45,403
18	Lennox and Addington	300	7,719	8,655	....	5,40	5,340	....	17	586	107	32,561
19	Lincoln	4,381	9,164	6,364	....	2,211	195	1,000	290	749	2,078	36,970
20	Middlesex	12,053	23,687	13,711	7,473	20,000	17,085	....	....	1,963	607	107,617
21	Norfolk	3,956	8,876	9,324	....	....	..	3,988	419	1,229	451	34,040
22	Northumberland and Durham	40	17,196	14,989	2,000	....	700	12.000	482	739	634	57,518
23	Ontario	481	8,618	10,687	..	1.241	179	35,000	306	954	283	62,481
24	Oxford	5,068	9,402	8,021	..	6,333	5,072	....	....	389	1,445	45,300
25	Peel	1,539	8,106	6,369	....	1,536	261	21,000	533	155	1,473	49,218
26	Perth	3,238	10,704	9,548	8,431	780	9,170	3,500	58	102	601	55,234
27	Peterborough	45	9,618	5,905	1.013	1,698	1.779	9,000	541	1,978	1,329	42,265
28	Prescott and Russell	..	5,857	7,245	....	....	....	16,193	770	4,577	927	38,525
29	Prince Edward	82	5,195	4 761	....	5,000	450	....	141	54	....	18,622
30	Renfrew	275	6,376	9,604	976	2,077	1,762	....	....	406	303	26,368
31	Simcoe	5,857	14,126	16,603	....	12,679	2,297	80,000	2,270	4,548	4,269	166,307
32	Stormont, Dundas and Glengarry	10	8,560	16,439	....	4,691	1,962	5,400	320	1,920	612	44,885
33	Victoria	746	7,393	7,944	....	....	....	17,500	550	1,279	1,685	49,458
34	Waterloo	7,581	8.477	8.321	....	1,210	998	23,000	375	41	535	61,416
35	Welland	4.115	9,691	9,819	....	1,851	92	9,146	140	1,356	360	40,983
36	Wellington	7,680	13,135	10,932	....	....	....	21,000	387	532	2,914	87,468
37	Wentworth	400	11,578	7,843	7,072	....	660	....	412	815	2,501	49,498
38	York	7,784	53,719	12,232	....	3,052	778	34,159	1,914	16, 014	2,31[illegible]	164,952

* Special deposit.

COUNTY MUNICIPALITIES, 1899.—*Continued.*

Assets on December 31, 1899.						Liabilities on December 31, 1899.							
Cash in treasury.	Rates due from local municipalities.	Sinking Fund and other investments in stocks, mortgages, debentures, etc., special deposits, etc.	Land, buildings, furniture, etc.	Miscellaneous.	Total assets.	School grant unpaid.	Railway debentures outstanding (principal).	All other debentures outstanding (principal).	Loans for current expenses and interest due on same.	Local municipalities for non-resident taxes collected	Miscellaneous.	Total liabilities.	No.
$	$	$	$	$	$	$	$	$	$	$	$	$	
11,779	.....	.....	106,000	..	117,779	..	.....	7,949	....	.....	1,146	9,095	1
6,845	3,324	6,000	80,000	3,067	99,236	682	.....	19,328	.....	....	3,603	23,613	2
.....	25,142	15,761	180,000	.....	220,903	.....	.....	45,000	11,758	.	1,561	58,319	3
69	6,132	9,504	40,000	716	56,421	1,200	.....	13,000	2,500	828	1,648	19,176	4
8,882	23,636	.....	171,000	2,950	206,468	587	.....	49,860	9,000	131	.....	59,578	5
2,686	23,374	.....	*70,000	3,562	99,622	.....	.....	23,638	23 000	...	.....	46,638	6
137	27,147	2,000	117,000	10,356	156,640	15	149,000	.....	3,050	979	4,470	157,514	7
.....	14,035	†24,945	87,638	708	127,326	125	.....	26,000	.....	829	13	26,967	8
1,426	997	.....	30,000	.....	32,423	.....	.....	.....	1,600	.....	340	1,940	9
496	4,394	.....	.....	38	4,928	.....	1,000	.....	1,500	.....	1,010	3,510	10
5,744	1,466	.....	50,000	.....	57,210	1,137	.....	.....	.....	270	.....	1,407	11
74	39,487	61,259	60,000	.....	160,820	700	30,000	28,093	40,017	1	‡5,537	104,348	12
596	21,810	20,562	77,000	.....	119,968	.....	.....	73,000	7,096	632	.....	80,728	13
189	15,083	.....	§141,500	3,755	160,527	.....	.....	50,556	12,589	54	.....	63,199	14
2,117	15,992	... ..	54,500	.....	72,609	.....	.....	13,718	5,000	1,450	141	20,309	15
.....	.....	.....	54,000	454	54,454	... ..	.....	.....	1,097	.....	.....	1,097	16
191	15,129	17,534	138,000	1,062	171,916	50	.....	45,000	15,791	172	500	61,513	17
9,457	14,502	.....	55,000	...	78,959	...	.....	86,300	.....	303	... ..	86,603	18
1,839	11.357	.....	101,500	2,769	117,465	464	.....	||6,686	2,000	461	70	9 681	19
26,620	59,469	*a*54,135	84,000	13,200	237,424	...	.....	486,260	.....	164	‡31,445	517,869	20
118	3,403	.....	59,000	409	62,930	.....	.....	.....	... ..	....	...	.....	21
2,509	19,222	4,000	50,500	45	76,276	.....	.....	20,000	6,000	405	.....	26,405	22
15,041	3,729	....	50,000	... ..	68,770	.....	.....	14,361	12,086	548	169	27,164	23
30,462	6,649	.....	190 000	706	227,817	205	.. . ...	120,474	... .	322	2,493	123,494	24
3	.	.....	76,386	1.444	77,833	.....	.. ...	4,987	104	... ..	1,400	6,491	25
19,476	9,357	8,431	125,000	.....	162,264	.....	120,000	83,470	3,500	83	936	207,989	26
6,868	9,214	7,465	93,355	2.156	119,058	1,043	.....	40,365	17,648	656	4,355	64,067	27
782	11,944	....	20,000	... ..	32,726	.....	.....	.....	17,058	.....	.....	17,058	28
446	5,492	... ...	33,500	.....	39,438	.....	5,000	.....	.....	...	.....	5,000	29
5,837	15,940	6,753	50,000	.....	78,530	152	.....	33,404	.....	762	669	34,987	30
10,717	31,903	18,600	*c*168,000	*d*23,317	252,537	1,200	.....	48,321	35.000	15	7,692	92,228	31
386	14.439	.....	61,000	506	76,331	.....	.....	33,634	3,500	..	577	37,711	32
665	17,554	.....	68,564	1,684	88,467	115	.....	.....	19,000	465	211	19,791	33
66	... .	.....	85,000	1,114	86,180	...	.....	23,726	1,899	.....	.....	25,625	34
4,240	67	.....	128,884	242	133,433	110	.....	.....	.....	.....	.....	110	35
20,625	35,969	... .	80,000	2,680	139,274	3,400	.....	.....	28,000	312	13,785	45,497	36
23,208	...	12,372	92,000	5,176	132,756	220	.....	31,000	.....	...	1,710	32,930	37
.....	26,510	... ..	100,000	46,052	172,562	180	.....	38,558	40,792	1,185	3,948	84,663	38

* Reduced $14,000, Windsor share of buildings.

† Including $14,995 deposited to credit of general account.

‡ Including $1,676 formerly described as "Bills Payable," but which cannot be traced in later returns

§ Including $61,700 for iron bridges.

Including $1,700 previously omitted from debenture liabilities for Court House.

a Including $7,800 Hospital Trust Funds.

b Including $15,776 to City of London for Victoria Hospital.

c Including $20,000 for iron bridges.

d Including $19,325 ex-treasurer's estate and bonds.

STATISTICS OF TOWNSHIP MUNICIPALITIES OF ONTARIO.

POPULATION, AREA, ASSESSMENT AND TAXATION—1901.

RECEIPTS, DISBURSEMENTS, ASSETS AND LIABILITIES—1900.

No.	Township Municipalities and Counties in which located.	Population 1901.	No. of acres assessed 1901.	Assessed value of real and personal property and income taxable, 1901.	Taxes imposed for all purposss, 1901.			Receipts, 1900.								
					Total.	Per head.	Mills on $.	Balance from 1899.	Municipal and School taxes.	License fees, rents, fines, etc.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	$ c		$	$	$	$	$	$	$	$	$
1	Adelaide, Middlesex	1,972	44,263	874,845	12,167	6 17	13.9	5,349	11,737	58	.....	27	1,000	1,300	125	19,596
2	Adjala, Simcoe	2,087	45,987	853,240	8,833	4 23	10.4	792	9,681	153	.....	.....	1,054	....	24	11,704
3	Admaston, Renfrew	2,243	70,091	742,725	4,689	2 54	7.7	118	6,453	72	.....	.....	.....	....	263	6,906
4	Adolphustown, Lennox and Addington	486	11,597	343,161	2,773	5 71	8 1	386	2,735	...	.....	120	.....	....	4	3,245
5	Albemarle, Bruce	1,451	55,188	176,387	4,276	2 95	24 2	338	4,573	56	.....	.....	1,300	.....	14	6,281
6	Alberton, Rainy River	193	19,154	42,795	832	4 31	19.4	125	598	...	.....	.....	.....	....	111	834
7	Albion, Peel	2,715	55,850	1,112,200	11,007	4 05	9 9	...	11,895	109	.....	.....	1,820	....	127	13,951
8	Aldborough, Elgin	4,426	74,450	1,673,310	25,804	5 83	15.4	146	28,279	372	1,659	152	5,632	400	40	36,680
9	Alfred, Prescott	3,025	43,907	328,050	8,154	2 70	24.9	7	7,573	179	.....	.....	400	.....	...	8,159
10	Algona S., Renfrew	939	31,586	38,125	1,261	1 34	33 1	...	1,626	.....	.....	.....	.....	442	1	2,069
11	Alice and Fraser, Renfrew	1,978	57,383	118,820	3,480	1 76	29.3	100	3,231	12	.....	21	.....	....	42	3,406
12	Alnwick, Northumberland	991	16,510	323,950	3,104	3 13	9.6	86	3,340	89	.....	.....	550	....	80	4,145
13	Amabel, Bruce	3,331	61,288	639,080	10,887	3 27	17.0	3,613	8,296	125	2,187	31	.....	....	496	14,748
14	Amaranth, Dufferin	2,643	63,290	1,127,985	14,370	5 44	12.7	51	17,012	10	.....	.....	3,000	....	8	20,081
15	Ameliasburg, Prince Edward	2,903	43,158	1,130,630	11,076	3 82	9 8	23	12,510	47	.....	948	642	....	10	14,180
16	Amherst Island, Lennox and Addington	825	14,619	348,900	3,727	4 52	10.7	54	3,384	29	.....	.....	700	....	20	4,187
17	Ancaster, Wentworth	3,612	45,928	2,224,752	14,976	4 15	6.7	1,116	14,375	3,643	4,365	1,163	.....	....	28	24,629
18	Anderdon, Essex	1,688	23,235	634,210	7,426	4 40	11.9	456	9,376	237	.....	38	1,927	6,000	59	18,093
19	Anson and Hindon, Haliburton	267	12,953	35,269	966	3 62	27.4	55	967	25	.....	.....	.....	....	246	1,293
20	Armour, Parry Sound	855	38,975	178,793	2,054	2 40	11.5	726	2,809	12	.....	.....	.....	....	5	3,547
21	Arran, Bruce	2,339	54,120	1,454,410	7,616	3 26	5 2	2,213	8,873	28	.....	88	.....	....	5	11,207
22	Artemesia, Grey	3,553	68,185	1,033,790	12,983	3 65	12.6	252	13,362	157	1,000	53	3,285	....	89	18,198
23	Arthur, Wellington	2,830	64,446	1,423,550	11,790	4 17	8 3	661	12,186	26	.....	2	1,800	1,200	368	16,243
24	Ashfield, Huron	3,284	64,012	1,687,650	13,733	4 18	8 1	825	14,408	166	.....	.....	1,700	....	157	17,256
25	Asphodel, Peterborough	1,767	37,780	844,595	7,832	4 43	9.3	409	7,927	27	.....	84	1,200	....	174	9,821
26	Assiginack, Manitoulin	1,131	38,223	155,126	2,677	2 37	17.3	627	2 706	91	.....	.....	.....	....	.....	3,424
27	Athol, Prince Edward	1,110	23,394	471,195	3,343	3 01	7 1	230	3,739	1	.....	102	.....	.....	.....	4,072
28	Augusta, Grenville	3,798	74,526	1,289,735	13,060	3 44	10.1	3,052	10,665	743	487	368	.....	.....	37	15,352

STATISTICS OF TOWNSHIP MUNICIPALITIES OF ONTARIO.—*Continued.*

POPULATION, AREA, ASSESSMENT AND TAXATION—1901.

RECEIPTS, DISBURSEMENTS, ASSETS AND LIABILITIES—1900.

No.	Disbursements, 1900.														Assets on December 31, 1900.					Liabilities on December 31, 1900.				
	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Construction of buildings, waterworks, etc.	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
1	712	270	2,668	..	....	3,494	5,123	127	.....	261	1,000	59	206	13,920	5,676	..	..	2,549	8,225	3,430	1,039	.....	100	4,569
2	589	154	1,748	..	81	2,306	4,315	....	.....	.....	1,054	16	48	10,311	1,393	1,125	...	..	2,518	1,733	..	.....	.....	1,733
3	348	155	649	..	57	1,249	2,909	....	...	110	800	14	53	6,344	562	2,166	....	817	3,545	1,620	111	.....	302	2,033
4	195	64	173	..	102	1,086	1,140	....	.....	.....	.....	.....	1	2,761	481	..	3,000	500	3,984	..	..	.....	.....	.....
5	555	153	792	....	74	623	2,084	....	.....	.....	.....	.....	.....	6,245	36	4,619	.....	764	5,419	1,462	....	1,330	813	3,605
6	85	29	265	....	..	..	270	....	.....	.....	.....	.....	36	685	149	669	.....	..	818	....	....	.....	47	47
7	647	166	2,093	....	..	2,282	6,470	....	.....	.....	1,851	54	10	13,573	378	..	.....	800	1,178	.....	2,900	.....	.....	2,900
8	1,158	681	5,256	..	120	4,703	7,610	1,297	1,142	3,463	8,000	2,152	595	36,180	500	17,308	5,766	25,268	48,842	6,360	32,425	13,876	1,424	54,085
9	586	82	600	..	33	1,087	3,853	595	.....	118	..	51	987	7,992	167	4,595	.....	450	5,212	3,566	472	2,890	280	7,198
10	127	49	35	..	15	270	1,419	....	.....	70	20	17	17	2,039	30	495	....	1,002	1,527	468	652	..	30	1,150
11	230	144	141	85	....	500	1,961	....	226	..	..	48	12	3,347	69	1,042	691	273	2,065	460	930	....	358	1,748
12	389	57	736	....	....	562	1,339	....	.....	.....	550	12	116	3,761	384	93	...	974	1,451	....	....	.....	..	.....
13	744	263	1,646	....	62	674	4,277	13	....	1,215	..	1,464	480	10,838	3,910	2,414	33	3,683	10,040	1,163	23,696	.....	...	24,859
14	485	160	1,463	..	19	2,463	4,332	2,417	....	3,503	3,500	756	203	19,301	180	4,129	..	1,900	6,209	1,427	10,792	.....	467	12,686
15	668	240	1,710	....	371	2,198	5,170	....	892	.....	2,016	841	71	14,177	3	676	33,865	6,127	40,671	..	15,000	642	63	15,705
16	225	90	267	6	212	1,143	1,255	....	.....	.....	755	38	75	4,066	121	1,020	.....	..	1,141	290	.....	700	.....	990
17	1,100	1,404	6,077	....	618	3,571	7,354	....	3,107	.....	.....	120	240	23,591	1,038	3,065	46,959	6 314	57,376	...	..	5,050	..	5,050
18	744	1,225	1,736	..	280	1,287	3,083	417	..	565	7,755	131	776	17,999	94	8,001	....	7,000	9,095	1,430	8,156	1,327	1,037	14,950
19	163	33	107	....	..	109	616	....	.....	114	.....	16	...	1,158	135	625	....	619	1,379	1,114	143	..	...	1,257
20	280	58	354	....	5	....	1,663	....	.....	.....	.....	.....	45	2,405	1,142	2,434	.....	73	3,649	1,731	.....	.....	1,368	3,099
21	784	213	1,248	....	11	2,666	3,952	....	.....	.....	.....	.....	171	9,045	2,162	....	1,441	852	4,455	.....	.....	.....	.....	.....
22	962	344	3,083	..	266	2,029	6,109	....	399	1,000	3,285	456	104	18,037	161	235	3,099	866	4 361	.....	6 900	.....	.....	6,900
23	891	167	1,788	58	5	4,067	6 522	....	.....	250	1,800	117	77	15,745	498	6	.....	1,460	1,964	.....	2,408	.....	1	2,409
24	717	584	3,969	..	....	2,249	6,627	58	.....	331	1,200	96	143	15,977	1,279	2,655	.....	1,270	5,204	2,257	1,170	508	179	4,114
25	397	52	1,291	....	174	2,815	2,929	....	215	233	1,200	239	149	9,694	127	212	2,607	3,680	6,626	196	3,166	....	1,461	4,823
26	381	212	346	..	....	..	1,916	....	.....	.....	.....	.....	87	2,942	482	270	.....	600	1 352	....	....	.....	..	.....
27	162	164	148	3	280	938	2,137	....	.....	.....	.....	.....	6	3,838	234	67	2,250	1,025	3,576	....	....	.....	.....	.....
28	865	364	1,443	592	20	2,890	6,958	196	....	.....	560	240	221	14,289	1,063	4,610	18,715	3,030	27,418	3,321	3,200	1,500	.....	8,021

No.	Township Municipalities and Counties in which located.	Population, 1901.	No. of acres assessed 1901.	Assessed value of real and personal pr perty and income taxable, 1901.	Taxes imposed for all purposes, 1901. Total.	Per head.	Mills on $.	Receipts, 1900. Balance from 1899.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	$ c.		$	$	$	$	$	$	$	$	$
29	Bagot and Blythefield, Renfrew	1,397	55,543	145,490	3,066	2 19	21.1	829	3,458	62					25	4,374
30	Balfour, Algon a	629	21,655	78,846	2,500	3 97	31.7	272	1,208	158			1,605		140	3,383
31	Bangor, Wicklow and McClure, Ha-tings	952	34,453	41,065	2,246	2 36	54.7		1,620	32			71		347	2,070
32	Barrie, Frontenac	558	24,919	51,641	1,413	2 53	27.4	45	1,416	30			23		19	1,533
33	Barton, Wentworth	3,539	13,142	1,409,997	11,955	3 38	8.5	4 108	10,975	289	373	1,011			175	16,931
34	Bastard and Burgess S., Leeds	2,296	56,693	738,765	11,498	5 01	15.6	1,927	9,446	146		1,050			11	12,583
35	Bathurst, Lanark	2,378	61,786	800,820	7,380	3 10	9 2	357	7,804	10		35			25	8,231
36	Bayham, Elgin	3,540	56,667	1,075,350	21,215	5 99	19.7		17,634	167			13,855	400	322	32 378
37	Beckwith, Lanark	1,615	56,853	500,025	6,566	4 07	13.1	1,225	5,987	123		330			16	7,681
38	Bedford, Frontenac	1,466	63,866	178,752	5,623	3 84	31.5	311	5,427	43				250		6,031
39	Belmont and Methuen, Peterborough	1,953	83,550	195,625	6,383	3 27	32.6	10	5,467						518	5,995
40	Bentinck, Grey	2,997	74,826	1,072,040	10,386	3 47	9.7	1,113	12,899	53		9			189	14,263
41	Bertie, Welland	2,891	34,575	1,489,610	15,833	5 48	9.4	586	13,097	486			48		224	14,441
42	Beverly, Wentworth	3,837	69,991	2,000,981	14,820	3 86	7.4	94	13,627	66		724	556		135	15,202
43	Bexley, Victoria	871	28,476	128,653	3,537	4 06	27 5	124	3,984	37		65			432	4,642
44	Biddulph, Middlesex	2,357	39,285	1,219,065	11,096	4 71	9.1	3,713	10,790	150			3,500		67	18,220
45	Billings, Manitoulin	342	18,990	110,394	1,054	3 08	9.5	267	964	8					4	1,243
46	Binbrook, Wentworth	1,229	26,400	967,300	5,946	4 84	6.1	1,095	6,076						7	7,178
47	Blandford, Oxford	1,596	29,678	1,083,560	8,456	5 30	7 8	1,272	7,699	207		24	1,600		6	10,808
48	Blanshard, Perth	2,518	45,911	2,094,500	14,770	5 87	7.1	4,416	14,071	18			2,426		580	21,511
49	Blenheim, Oxford	4,186	66,839	2,303 890	22,576	5 39	9 8	575	20,529	778			2,800		278	24,960
50	Blind River, Algoma	490	7,366	148,140	1,132	2 31	7.6									
51	Bonfield, Nipissing	1,338	31,112	151,749	2,990	2 23	19.7	20	3,347	89			500		71	4,027
52	Bosanquet, Lambton	2,530	70,982	1,525,668	13,481	5 33	8 8	574	13,457	57		11	2,000	2,281	889	19,269
53	Brant, Bruce	3,794	69,640	1,992,785	15,933	4 20	8.0	1,895	16,271	174	6,357	141			1,467	26,305
54	Brantford, Brant	5,235	71,705	3,814,948	24,472	4 67	6.4	1,272	24,950	69	30,950	3,043		2,000	507	62,791
55	Brighton, Northumberland	2,434	48,818	1,179,533	9,083	3 73	7.7	1,479	8,924	2			800		50	11,255
56	Brock, Ontario	3,592	66,219	2,080,290	14,900	4 15	7.2	165	15,687	117			4,000		82	20,051
57	Bromley, Renfrew	2,025	50,654	169,066	5,506	2 72	32.6	574	5,351	195					47	6,167
58	Brooke, Lambton	3,383	74,048	1,825,140	28,697	8 48	15.7	1,380	25,887	76		75	4,500	5,872	404	38,194
59	Brougham, Renfrew	568	19,800	31,515	979	1 72	31.1	56	952	26						1,034
60	Bruce, Bruce	2,970	66,811	1,385,535	11,824	3 98	8.5	1,057	11,988	88	1,509	93	1,000		344	16,079
61	Brudenell and Lyndoch, Renfrew	1,417	52,553	69,310	2,318	1 64	33.4	259	3,076	62						3,397
62	Brunel, Muskoka	774	40,465	137,030	1,863	2 41	13 6	465	2,769	12					56	3,302

No.	Disbursements, 1900.													Assets on December 31, 1900.					Liabilities on December 31, 1900.				
	Allowances, salaries, and commissions.	Other expenses of municipal government.	Roads and bridges.	Construction of buildings, water works, &c	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
29	337	139	326	....	62	394	1,881	....	....	....	321	....	7	3,467	907	611	.....	800	2,318	410	....	....	48	488
30	281	57	345	....	14	....	985	....	....	..	1,080	33	292	3,090	293	1,459	.....	290	2,042	950	....	600	148	1,698
31	393	6	286	....	....	162	1,073	....	....	....	115	29	....	2,070	....	2,112	.....	331	2,443	1,628	....	421	360	2,349
32	208	58	26	....	10	69	900	....	....	83	....	....	29	1,383	150	622	....	311	1,083	474	....	265	40	779
33	1,349	774	2,496	....	156	2,048	4,461	....	401	1,000	.....	340	409	13,434	3,497	865	15,271	8,332	27,965	296	8,000	500	70	8,866
34	692	130	682	....	6	1,567	4,172	87	1,447	....	.....	1,150	211	10,384	2,196	936	28,301	2,600	34,033	1,168	23,000	....	460	24,568
35	508	164	701	....	18	1,715	4,378	....	....	....	.....	....	107	7,592	639	615	780	600	2,634	....	....	....	....	....
36	1,14	1,907	4,054	..	264	2,810	7,477	518	....	1,805	9,462	2,171	739	32,578	....	8,432	....	2,553	10,985	3,774	33,615	5,858	1,187	44,432
37	673	..	1,900	....	41	1,286	3,213	....	....	....	....	....	....	7,113	568	....	8,124	....	8,692	....	....	....	....	....
38	261	45	503	....	33	539	3,300	....	....	43	....	42	94	4,860	1,171	862	.....	500	2,533	1,342	663	....	93	2,098
39	464	127	1,036	40	38	583	2,934	....	....	122	....	96	371	5,811	184	3,445	....	1,482	5,111	933	1,482	....	330	2,745
40	580	207	2,957	62	204	4,477	5,142	....	....	249	....	43	250	14,161	102	2,819	....	....	2,921	....	1,968	....	....	1,968
41	678	394	2,479	..	67	3,098	6,027	29	....	876	....	296	497	14,441	....	3,329	....	11,505	14,834	.....	5,016	48	495	5,559
42	992	449	2,389	....	281	4,132	6,516	53	106	....	.....	....	281	15,202	....	2,824	13,850	3,200	19,874	....	....	556	....	556
43	357	139	327	....	23	253	2,436	....	539	....	.....	375	187	4,636	6	2,127	2,311	780	5,224	898	7,500	....	50	8,448
44	693	205	4,293	....	..	1,619	3,783	....	....	595	4,000	218	12	15,418	2,80.	321	....	1,710	4,833	1,534	960	1,500	65	3,999
45	188	36	189	....	5	....	492	....	....	....	....	....	46	956	287	1,141	....	20	1,448	322	.....	....	....	322
46	408	127	773	..	129	1,405	2,428	..	15	100	....	55	140	5,720	1,458	431	155	400	2,444	....	1,005	.....	....	1,005
47	583	143	1,627	..	78	1,834	2,679	....	....	563	1,600	106	254	9,467	1,341	....	....	252	1,593	.....	1,766	....	....	1,766
48	727	182	4,268	....	64	4,061	4,362	....	....	308	2,426	58	227	16,683	4,828	156	....	1,186	6,170	4,061	.....	.....	155	4,216
49	1,291	282	1,774	22	243	4,750	8,835	....	....	860	2,800	531	175	24,563	397	37	....	8,737	9,171	....	8,642	....	....	8,642
50	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
51	430	264	266	..	32	....	2,387	....	....	....	400	5	35	3,759	268	3,068	..	111	3,447	2,098	....	627	138	2,863
52	907	864	2,931	....	118	2,263	4,989	2,515	....	1,553	2,000	265	257	18,162	1,107	27	....	6,316	7,444	....	5,188	....	972	6,160
53	843	469	8,344	....	13	3,706	5,747	..	4,363	....	....	....	482	23,967	2,338	1,664	4,363	....	8,365	....	....	....	191	191
54	2,051	756	4,183	....	935	4,652	13,585	....	30,950	811	....	767	1,176	59,866	2,925	3,907	68,742	12,153	87,727	712	8,265	....	5,482	14,459
55	563	163	1,781	....	129	1,676	4,524	....	....	....	800	16	187	9,829	1,426	23	....	850	2,299	....	....	....	....	....
56	1,105	380	2,564	....	623	2 606	6,708	....	....	107	4,000	203	786	19,072	979	46	....	3,036	4,061	143	1,306	....	269	1,718
57	465	127	300	..	....	1,589	2,838	85	....	....	....	....	155	5 559	608	1,265	....	1,325	3,198	300	....	....	....	300
58	797	978	4,908	....	312	2,439	6,722	8,608	....	8,548	2,500	1,731	208	37,181	1,013	11,312	....	699	13,024	336	32,167	4,500	400	37,403
59	198	17	136	..	....	121	223	....	....	100	113	19	....	927	107	339	....	106	546	164	100	....	34	298
60	609	149	3,886	..	5	3,037	4,481	....	1,906	115	1,000	300	236	15,724	355	1,030	1 906	1,223	4,514	....	5,795	....	196	5,991
61	268	109	137	..	20	291	1,610	....	....	....	....	....	....	2,435	962	1,370	....	650	2,982	1,680	....	....	....	1,680
62	260	60	728	275	5	....	922	....	....	100	....	18	61	2,429	873	1,716	....	800	3,389	842	200	....	....	1,042

No.	Township Municipalities and Counties in which located.	Population 1901.	No. of acres assessed 1901.	Assessed value of real and personal property and income taxable, 1901.	Taxes imposed for all purposes, 1901.			Receipts, 1900.								
					Total.	Per head.	Mills on $.	Balance from 1899.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	$ c.		$	$	$	$	$	$	$	$	$
63	Burford, Brant	4,104	66,350	2,193 941	19,079	4 65	8 7	4,113	19,773	29	.....	83	.....	650	73	24,721
64	Burgess N., Lanark	824	32,908	185,775	2,675	3 25	14 4	186	2,165	.....	.....	.....	.....	.....	.....	2,351
65	Burleigh and Anstruther, Peterborough	692	29,283	89,948	2,448	3 54	27 2	46	1,662	14	.....	.....	200	.....	243	2,165
66	Burpee, Manitoulin	274	14,322	26,103	716	2 61	27.4	71	773	.....	.....	6	.....	.....	.....	850
67	Caistor, Lincoln	1,705	32,769	665,290	6,002	3 52	9.0	1,757	5,578	9	.....	.....	.....	.....	59	7,403
68	Caldwell, Nipissing	853	29,665	107,202	2,161	2 53	20 2	315	1,436	181	.....	.....	.....	.....	.....	1,932
69	Caledon, Peel	3,880	68,497	1,778,845	17,270	4 45	9.7	370	14,416	266	.....	1	2,310	.....	29	17,442
70	Caledonia, Prescott	1,771	45,269	284,451	7,317	4 13	25 7	.....	7,590	98	.....	.....	125	550	120	8,483
71	Calvin, Nipissing	455	25,096	60,628	1,118	2 46	18.4	89	1,104	.....	.....	.....	125	.....	.....	1,318
72	Cambridge, Russell	3,147	59,646	439,182	11,309	3 59	25.8	11	9,050	190	.....	.....	1,326	.....	204	10,781
73	Camden, Kent	2,550	40,765	1,013,075	14,997	5 87	14.8	.....	16,009	66	.....	.....	1,116	1,212	184	18,587
74	Camden East, Lennox and Addington	5,321	86,356	1,820,455	20,151	3 79	11.1	1,125	22,309	264	30,000	814	1,500	.....	15	56,027
75	Cameron, Nipissing	166	10,589	32,150	450	2 71	14.0	15	613	.....	.....	.....	.....	.....	.....	628
76	Camborough, Haldimand	842	21,238	354,250	3,792	4 50	10 7	473	3,868	6	.....	.....	150	.....	.....	4,497
77	Caradoc, Middlesex	3,898	61,969	1,203,040	18,880	4 84	15.7	8,859	18,582	83	.....	.....	.....	1,249	232	29,005
78	Carden, Victoria	690	44,957	62,738	2,295	3 33	36.6	63	2,248	.....	.....	.....	.....	.....	50	2,361
79	Cardiff, Haliburton	69	23,867	31,532	2,026	2 98	64.3	4	2,127	.....	.....	.....	1,051	400	.....	3,582
80	Cardwell, Muskoka	446	30,468	74,180	1,234	2 77	16.6	970	1,349	5	.....	.....	.....	.....	.....	2,324
81	Carling, Parry Sound	296	28,537	35,478	1,284	4 34	36.2	127	508	.....	.....	.....	3	.....	.....	638
82	Carlow, Hastings	594	20,108	49,210	2,309	3 89	46 9	462	1,273	.....	.....	.....	.....	.....	210	1,945
83	Carnarvon, Manitoulin	698	23,881	95,022	1,835	2 63	19.3	114	1,685	9	.....	15	.....	.....	7	1,830
84	Carrick, Bruce	4,667	59,497	2,090,237	13,560	2 91	6.5	2,097	14,212	366	.....	202	.....	.....	27	16,904
85	Cartwright, Durham	1,702	37,006	730,020	5,968	3 51	8.2	157	6,961	77	.....	.....	1,205	.....	11	8,411
86	Cavan, Durham	2,418	63,286	1,555,525	11,448	4 73	7 4	1,321	10,852	93	.....	.....	246	.....	182	12 691
87	Cayuga N., Haldimand	1,476	32,761	731,060	5,952	4 03	8.1	521	5,650	47	.....	8	.....	.....	5	6,231
88	Cayuga S., Haldimand	701	13,072	394,100	2,991	4 27	7 6	329	2,370	.....	.....	.....	.....	.....	1	2,700
89	Chaffey, Muskoka	1,033	43,416	143,695	3,045	2 95	21 2	356	2,949	13	.....	.....	75	.....	128	3,521
90	Chandos, Peterborough	778	42,220	56,110	2,109	2 71	37.6	445	1,850	.....	.....	.....	.....	.....	.....	2,295
91	Chapleau, Algoma	726	5,760	97,760	1,980	2 73	20 3	.....	.....	.....	.....	.....	.....	.....	.....	.....
92	Chapman, Parry Sound	750	38,146	143,059	1,282	1 71	9 0	510	1,430	95	.....	.....	.....	.....	48	2,083
93	Chapple, Rainy River	344	23,039	154,317	1,775	5 16	11.5	.....	557	20	.....	.....	146	.....	1	724
94	Charlottenburg, Glengarry	4,896	82,388	1,176,050	18,778	3 84	16 0	.....	16,388	321	.....	.....	119	.....	138	16,966
95	Charlotteville, Norfolk	3,233	60,151	917,363	12,491	3 86	13 6	985	16,718	25	.....	606	5,183	.....	4	23,521
96	Chatham, Kent	4,749	84,482	1,976,818	46,463	9 78	23 5	90	42,413	86	.....	.....	28,774	13,302	343	85,008

No.	Disbursements, 1900.													Assets on December 31, 1900						Liabilities on December 31, 1900.				
	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges	Construction of building, waterworks, &c	Charities	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements	Balance on hand.	Taxes in arrears	Sinking Fund and other investments and deposits	Miscellaneous.	Total assets	County levy and school rates due and unpaid.	Debentures outstanding	Temporary loans.	Miscellaneous.	Total liabilities.
	%	$	%	%	%	%	%	%	%	%	%	%	$	$	%	%	%	$	$	%	$	%	$	$
63	915	249	5,530	....	611	3,736	7,966	1,430	....	640	....	82	574	21,739	2,982	....	2,141	550	5,673	....	1,150	.....	1,449	2,599
64	252	85	193	....	....	480	1,281	.....	.....	.....	.....	.....	8	2,299	52	272	.....	600	924	.....	.....	.....	22	22
65	295	19	24	....	....	.....	630	.....	.....	218	100	139	181	1,609	556	850	.....	996	2,442	1,313	1,706	900	50	3,969
66	101	41	14	....	....	.....	369	.....	68	.....	103	120	....	816	34	743	194	.....	971	359	2,000	.....	.....	2,359
67	331	181	1,068	....	....	1,568	2,719	.....	.....	.....	.....	.....	224	6,091	1,312	50	.....	1,000	2,362	1,568	.....	.....	.....	1,568
68	113	108	274	238	....	.....	900	.....	.....	70	.....	34	43	1,780	152	1,610	....	937	2,699	723	599	.....	155	1,477
69	880	356	2 959	..	140	2,774	8,018	.....	.....	.....	1,800	43	152	17,102	340	608	....	2,000	2,948	.....	.....	510	.....	510
70	553	187	352	....	..	1,608	4,436	25	..	217	717	246	45	8,386	97	2,987	....	1,084	4,168	1,216	1,193	1,748	1,260	5,417
71	143	25	18	....	....	.....	824	.....	.....	100	125	34	31	1,299	19	1,153	....	400	1,572	193	400	.....	60	653
72	798	907	2,093	....	123	.....	3,705	686	....	392	1,456	391	157	10,702	79	5,021	....	1,689	6,789	4,149	4,615	3,119	381	12,264
73	809	263	3,624	....	346	1,601	4,620	1,523	.....	4,254	237	1,048	352	18,587	.....	8,007	....	1,196	9,203	1,884	22,345	1,116	128	25.472
74	1,120	798	5,623	37	410	5,576	8,567	.....	165	30,000	1,500	1,305	269	55,300	727	557	....	660	1,944	..	540	.....	975	1,515
75	186	5	21	....	....	.....	265	.....	.....	.....	.....	.....	1	472	156	256	.....	.....	412	175	.....	.....	33	208
76	260	62	355	..	125	1,133	1,718	.....	.....	.....	350	15	47	4,065	432	2	.....	.....	434	.....	.....	.....	.....	.....
77	1,051	317	4 890	..	1	4,079	6,847	1,638	.....	2,165	.....	427	912	22,327	6,678	1,629	....	5,743	14,050	4,004	8,074	.....	.....	12,078
78	247	45	405	..	18	262	1,186	.....	..	50	..	36	18	2,267	94	454	....	600	1,148	262	600	.....	34	896
79	190	43	64	....	....	500	1,808	.....	.....	66	508	101	115	3,395	187	2,236	..	271	2,694	1,090	671	999	94	2,854
80	237	59	215	....	71	....	510	.....	.....	32	.....	5	51	1,180	1,144	800	.....	.....	1,944	900	35	.....	236	1,171
81	143	46	4	....	....	.....	406	.....	.....	.....	.....	.....	.....	638	.....	996	....	.....	996	1 5	.....	3	45	183
82	241	20	289	....	19	138	993	.....	.....	100	.....	27	106	1,936	10	1,314	....	429	1,753	1,226	504	.....	42	1,772
83	187	38	261	....	15	.....	832	.....	.....	238	.....	60	56	1,687	143	2,604	....	862	3,609	1,110	762	.....	.....	1,872
84	663	852	1,359	..	41	3,347	8,082	.....	451	.....	.....	360	123	15,278	1,626	.....	3,662	5,150	10,438	.....	7,200	.....	.....	7,200
85	436	220	658	..	156	1,163	3,953	.....	.....	158	1,205	78	110	8,127	284	42	.....	3,053	3,379	.....	713	.....	.....	713
86	817	1 3	1,840	..	96	2,357	4,960	.....	.....	.....	246	5	480	10,914	1,780	257	.....	6,015	8,052	.....	.....	.....	1,437	1,437
87	363	101	637	....	13	1,862	2,872	.....	.....	.....	.....	.....	160	6,008	223	218	.....	.....	441	400	.....	.....	.....	400
88	145	23	37	..	22	900	1,266	.....	.....	.....	.....	.....	15	2,408	292	600	.....	1,200	2,092	.....	.....	.....	.....	.....
89	422	249	511	....	....	.....	1,613	.....	.....	247	200	82	197	3,521	....	3,220	.....	.....	3,220	.....	1,198	75	..	1,273
90	317	20	67	....	67	.....	1,254	.....	.....	.....	.....	.....	141	1,866	429	1,288	.....	.....	1,717	1,055	.....	.....	597	1,652
91	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
92	220	95	94	....	5	....	671	.....	.....	.....	.....	.....	35	1,120	963	509	.....	235	1,707	416	.....	.....	11	427
93	217	20	25	....	....	.....	202	.....	.....	.....	146	4	102	716	8	890	.....	.....	898	361	.....	.....	49	410
94	812	338	1,016	....	115	3,312	9,115	60	.....	1,146	190	733	129	16,966	.....	7,512	.....	4,478	11,990	5,099	14,858	.....	.....	19,957
95	765	101	2,457	....	98	3,796	5,891	294	183	1,349	5,600	653	1,832	23,019	502	1,463	8,947	600	11,512	316	10,467	1,183	.....	11,966
96	3,226	1,495	3,433	....	505	4,556	9,684	14,561	.....	15,683	24,948	4,943	1,931	84,965	43	36,205	.....	100,317	136,563	6,191	72,972	28,774	4,436	112,373

No.	Township Municipalities and Counties in which located.	Population 1901.	No. of acres assessed 1901.	Assessed value of real and personal property and income taxable, 1901.	Taxes imposed for all purposes, 1901.			Receipts, 1900.									
					Total.	Per head.	Mills on $.	Balance from 1	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments.	Interest and dividends	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	$ c.		$	$	$	$	$	$	$	$	$
97	Chinguacousy, Peel	3,853	80,099	2,916,115	18,808	4 88	6.4	....	17,676	214	10,778	1,478	....	....	327	30,473
98	Christie, Parry Sound	459	21,966	83,183	1,538	3 35	18.5	310	1,563	53	.....	.....	.....	.....	410	2,336
99	Clarence, Russell	5,203	69,985	381,177	13,351	2 57	35.0	1,196	12,613	249	.....	.....	2,000	.....	..	16,058
100	Clarendon and Miller, Frontenac	825	47,503	76,388	1,899	2 30	24.9	336	2,543	....	25	.....	.....	.....	8	2,912
101	Clarke, Durham	3,610	69,415	1,782,800	15,219	4 22	8.5	123	14,053	253	469	.....	485	.....	171	15,554
102	Clinton, Lincoln	1,882	24,818	1,046,556	10,868	5 77	10.4	251	9,906	....	.....	7	1,300	.....	14	11,478
103	Cockburn Island, Manitoulin	181	14,998	40,409	813	4 49	20.1	217	315	....	.....	.....	.....	.....	..	532
104	Colborne, Huron	1,756	34,202	1,081,350	7,269	4 14	6.7	6	6,918	88	.....	.....	1,200	.....	59	8,271
105	Colchester, N., Essex	1,894	30,436	596,729	15,071	7 95	25.3	....	15,563	....	.....	.....	7,500	.....	1,543	24,606
106	Colchester, S., Essex	2,803	34,470	1,026,274	17,161	6 12	16.7	1,792	18,410	100	.....	.....	.....	.....	59	20,361
107	Collingwood, Grey	3,728	68,000	1,380,075	16,334	4 38	11.8	130	16,267	70	5,879	186	7,200	.....	120	29,852
108	Cornwall, Stormont	5,594	63,610	1,061,032	15,007	2 68	14.1	1,160	15,645	308	.....	.....	.....	6 755	315	24,183
109	Cramahe, Northumberland	2,418	46,406	1,102,045	9,427	3 90	8.6	....	10,803	43	.....	.....	620	.....	208	11,674
110	Crosby N., Leeds	1,775	42,980	377,615	7,914	4 46	21.0	57	7,330	122	.....	175	1,000	.....	149	8,833
111	Crosby S., Leeds	1,588	35,916	384,616	6,450	4 06	16 8	1,297	6,291	73	1,036	390	.....	.....	...	9.087
112	Crowland, Welland	819	19,857	385,515	5,106	6 23	13.3	1,250	4,819	38	.....	.....	300	.....	25	6,432
113	Culross, Bruce	2,793	56,627	1,750,225	9,756	3 49	5.6	133	9,797	94	.....	2	700	.....	322	11,048
114	Cumberland, Russell	3,790	74,972	442,640	12,856	3 39	29.0	130	12,453	217	.....	.....	.....	4,287	210	17,297
115	Dalhousie and Sherbrooke N., Lanark	1,725	73,065	252,088	4,636	2 69	18 4	236	4,751	71	.....	.....	.....	.....	93	5,151
116	Dalton, Victoria	509	29,130	36,885	1,084	2 13	29 4	468	1,179	....	.....	.....	.....	.....	2	1,649
117	Darling, Lanark	714	43,311	63,515	1,975	2 77	31.1	....	1,767	5	.....	14	118	.....	159	2,063
118	Darlington, Durham	3,956	68,605	2,404,250	18,854	4 77	7 8	5,276	17,251	37	.....	16	2,079	1,350	201	26,210
119	Dawn, Lambton	3,363	65,536	892,970	22,100	6 57	24.7	379	18,310	66	.....	.....	1,208	8,213	276	28,452
120	Delaware, Middlesex	1,439	23,452	591,175	6,698	4 65	11.3	709	7,785	43	532	61	.....	.....	186	9,316
121	Denbigh, Ab. & Ash., Lennox & Addington	1,011	43,951	54,292	2 110	2 09	38.9	111	1,607	.....	.....	.....	.....	.....	193	1,911
122	Derby, Grey	1,772	40,309	772,800	8,240	4 65	10.7	238	7,654	75	.....	.....	2,200	.....	75	10,242
123	Dereham, Oxford	3,585	65,070	2,410,765	25,698	7 17	10.7	965	25,139	696	.....	255	.....	11,892	1,530	40,477
124	Dorchester N., Middlesex	3,471	51,579	1,711,227	17,535	5 05	10.2	5,325	17,454	101	.....	512	1,000	.....	851	25,243
125	Dorchester, S., Elgin	1,265	30,576	1,072,975	10,112	7 99	9.4	....	11,152	.....	.....	20	.....	.....	...	11,172
126	Douro, Peterborough	2,020	38,622	766,558	6,865	3 40	9.0	83	7,248	....	.....	.....	1,000	.....	163	8,494
127	Dover, Kent	4,210	68,041	1,764 754	31,731	7 54	18.0	304	38,685	316	.....	45	.....	9,087	186	48,623
128	Downie, Perth	2,704	48,560	2,064,750	17,824	6 59	8.6	447	12,795	118	.....	.....	2,810	3,176	469	19,815
129	Draper, Muskoka	950	38,944	93,241	2,315	2 44	24.8	793	2,226	38	.....	.....	.....	450	124	3,631
130	Drummond, Lanark	1,916	57,787	705,514	7,112	3 71	10.1	805	7,236	54	.....	.....	775	.....	2	8,872

No.	Disbursements, 1900.													Assets on December, 31, 1900.					Liabilities on December, 31, 1900.			
	Allowances, salaries and commissions.	Other expenses of municipal gov'm't.	Roads and bridges.	Construct'n of build. ings, waterworks, &c	Charities.	County levy.	Payments on account of schools and education	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
97	1,034	523	2,342		85	5,606	7,713		10,846	245	1,622	180	277	30,473		1,623	32,828	2,625	36,476		1,625	1,258	13	2,896
98	195	88	429	24	5		810			100		42	42	1,735	601	1,376		668	2,645		600		23	623
99	700	187	1,619		36	1,596	6,660	515		395	2,000	120	886	14,744	1,314	8,128		577	10,019	7,258	1,339	1,500		10,097
100	139	15	96		4	816	1,498				94		32	2,694	218	1,655	50		1,923			300	90	390
101	999	262	1,981		398	3,279	6,856		469	312	485	101	367	15,509	45	2,969		6,350	9 364	130	1,556			1,686
102	502	124	2,041		10	2,670	3,899			155	1,300	40	337	11,678	400	864		250	1,614					
103	77	12			5		355						58	507	25			40	65					
104	400	214	2,035	20	86	813	3,388				1,200	52	63	8,271		804			804	1,200			60	1,260
105	834	1,117	2,064		76	458	2,721	1,387		4,158	7,675	1,614	2,236	24,320	286	15,527		2,488	18,301	4	27,578	2,532	1,943	32,057
106	1,027	578	2,572		251	2,177	5,237	1,043		4,548		1,378	409	19,215	1,146	14,319		2,588	18,053	6,747	24,862		1,797	30,406
107	1,001	925	3,245	150	439	2,421	6,399		6,164	206	7,400	661	497	29,803	44	318	6,464	1,595	8,422		9,017	1,100	132	10,251
108	731	864	2,870	275	452	2,711	8,113	2,291		217		84	280	18,888	5,295	2 621		3,000	10,916	505	8,307		2,030	10,842
109	656	217	1,493		167	1,413	4,722				2,740	8	269	11,625	49	1,593		4,715	6,357				75	75
110	832	130	402		6	782	3,652		547	89	1,000	783	240	8,463	370	1,246	8,067	500	10,183	782	15,911	3,352		20,045
111	396	67	409			840	3,746		1,446	116	599	269	14	7,902	1,185		7,014	1,200	9,399		4,667			4,667
112	262	99	652		6	1,340	2,411			217	500	28	28	5,343	1,089	376		812	2,277	1,225				1,225
113	586	172	1,329		31	2 691	4,311		454		700	21	57	10,352	696			117	813				250	250
114	850	369	1,261	2,650	10	1,720	7,043	1,393		169		122	957	16,544	753	11,631		3,050	15,434	4,616	6,109		1,819	12,444
115	376	108	832		34	529	2,764						28	4,671	480	322		808	1,610					
116	198	40	257		16	169	674							1,294	355	226			581	109				109
117	156	68	178		48	159	1,340					19	2	1,970	93	585	200	60	938	302		433	173	908
118	862	611	3,557		289	3,608	10,271			125	2,079	82	356	21,840	4,370	2,610		688	7,698	3,444	1,225		150	4,819
119	869	2,223	2,511		383	1,632	5,516	3,486		3,702		703	2,408	23,433	5,019	21,050		10,630	36,699	8,011	20,894	1,208	7,152	37,265
120	492	369	1,526		103	1,849	2,617	404		612		130	100	8,202	1,114	2,947			4,061	1,815	1,847			3,662
121	210	41	187		27	333	970						82	1,850	61	540			601					
122	518	132	2,342	250	93	1,317	2,860	36		60	2,200	57	188	10,053	189	47		1,050	1,286		240		300	540
123	1,341	308	4,726	22	65	4,616	7,451	11,994		3,153		1,197	150	35,023	5,454	56	5,000	1,602	12,112	16	33,880		9,634	43,530
124	936	231	6,604		111	3,886	6,246	378		718	1,000	72	341	20,523	4,720	2,420	6,400		13,510	3,815	431			4,246
125	693	289	1,860		8	3,293	3,074	115			540	65	247	10,184	988	500		1,071	2,559			1,071	223	1,298
126	515	184	1,272		61	2,149	2,596			109	1,000	53	34	7,973	521	269		944	1,734		491		283	774
127	1,316	660	658		577	3,164	9,654	7,504		10,695	5,484	2,795	621	43,128	5,495	8,916		7,281	21,692	3,581	51,312		6,061	60,954
128	1,104	297	2,806		189	3,882	4,532	2,168			2,810		526	18,314	1,501	1,127		850	3,478		3,176		96	3,272
129	292	332	611		5		1,577			100		6	88	3,011	620	2,206		76	2,902	1,102	450			1,552
130	596	201	1,753		298	1,774	3,116			180		46	34	7,998	874	268		540	1,682		540	775		1,315

No.	Township Municipalities and Counties in which located.	Population, 1901.	No. of acres assessed 1901.	Assessed value of real and personal property and income taxable, 1901.	Taxes imposed for all purposes, 1901.			Receipts.							
					Total.	Per head.	Mills on $.	Balance from 1899.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	$ c		$	$	$	$	$	$	$	$	$
131	Drury, Denison and Graham, Algoma	626	37,333	201,793	3,424	5 47	17 0	700	2,064	140	.....	8	400	.....	.....	3,312
132	Dumfries N., Waterloo	1,994	44,275	1,867,955	9,935	4 98	5.3	.....	10,335	121	.....	.....	850	.....	86	11,392
133	Dumfries S., Brant	2,572	46,648	2,320,115	15,475	6 02	6 7	613	13,543	72	.....	4	2,500	.....	43	16,775
134	Dummer, Peterborough	1,857	68,917	614,505	5,859	3 16	9.5	612	6,450	11	.....	.....	800	.....	369	8,242
135	Dungannon, Hastings	751	35,774	50,635	1,818	2 42	35.9	125	2,524	38	.....	.....	.....	.....	210	2,897
136	Dunn, Haldimand	8 6	14,775	400,685	3,271	4 01	8 2	522	3,361	26	.....	5	.....	.....	.....	3,914
137	Dunwich, Elgin	3,045	69,331	1,742,350	23,880	7 84	13.7	1,452	20,198	35	.....	.....	10,100	1,045	30	32,860
138	Dymond, Nipissing	372	21,200	86,277	1,305	3 51	15.1	.....	.....	.....	.....	.....	.....	.....	.....	.....
139	Dysart, Guilford, etc., Haliburton	964	366,521	135,777	4,511	4 68	33.2	1,625	4,917	100	.....	.....	1,000	.....	280	7,922
140	Easthope N., Perth	2,012	43,105	1,938,140	13,106	6 51	6.8	4,317	11,942	127	.....	2	.....	.....	369	16,757
141	Easthope S., Perth	1,875	23,813	1,148,722	8,9.6	4 76	7.8	1,492	8,530	274	.....	3	1,200	.....	262	11,761
142	Eastnor, Bruce	1,655	51,591	349,950	5,458	3 30	15 6	84	5,623	223	4,755	232	205	.....	1,064	12,186
143	Edwardsburg, Grenville	3,630	69,190	1,169,375	12,752	3 51	10 9	.....	12,712	24	.....	709	209	.....	203	13,857
144	Egremont, Grey	3,139	72,409	1,530,175	10,773	3 43	7 0	757	12,049	32	.....	9	148	.....	175	13,170
145	Ekfrid, Middlesex	2,493	53,433	1,969,680	17,965	7 21	9.1	51	15,208	62	.....	.....	1,703	1,093	331	18,448
146	Elderslie, Bruce	2,139	53,401	1,292,695	10,217	4 78	7.9	69	10 056	.....	.....	9	2,110	.....	392	12,636
147	Eldon, Victoria	2,723	61,734	782,475	13,164	4 83	16.8	844	12,598	188	64	123	1,600	...	80	15,497
148	Elizabethtown, Leeds	3,859	78,104	1,370,800	16,554	4 29	12.1	407	16,445	1,145	.....	205	.....	.....	.....	18,202
149	Ellice, Perth	2,761	55,736	1,632,482	21,195	7 68	13 0	9,096	20,620	167	.....	.....	10,000	.....	1,096	40,979
150	Elma, Perth	3,598	67,235	1,633,530	22,707	6 31	13.9	20,755	22,055	93	.....	350	.....	2,738	1,689	47,680
151	Elmsley N., Lanark	1,009	28,448	375,930	3,336	3 31	8.9	484	3 372	.....	.....	.....	.....	.....	.....	3,856
152	Elmsley S., Leeds	828	22,251	453,375	3,746	4 52	8.3	401	2,878	175	.....	10	.....	.....	75	3,539
153	Elzevir and Grimsthorpe, Hastings	1,292	63,833	96,949	3,803	2 94	39.2	.....	3,872	61	.....	.....	471	.....	531	4,935
154	Emily, Victoria	1,938	59,830	950,596	11,151	5 75	11.7	230	10,087	.....	.....	.....	3,350	.....	709	14,376
155	Emo, Rainy River	485	30,853	120,015	1,886	3 89	15.7	2	909	28	.....	.....	350	.....	.....	1,289
156	Enniskillen, Lambton	4,659	81,852	1,481,890	30,429	6 53	20 5	7,672	32,309	48	.....	.....	.....	2,764	2,312	45,105
157	Ennismore, Peterborough	807	17,257	357,880	2,900	3 59	8 1	69	1,805	.....	.....	.....	.....	.....	.....	1 874
158	Eramosa, Wellington	2,566	44,070	1,829,955	10,430	4 06	5.7	1,225	10,241	236	.....	12	.....	.....	259	11,973
159	Erin, Wellington	3,368	70,631	2,022,925	13,750	4 08	6.8	47	13.997	159	.....	.....	.....	.....	30	14,233
160	Ernestown, Lennox and Addington	2,998	61,276	1,464,830	14,477	4 83	9.9	356	15,457	93	2,375	1,023	1,035	.....	172	20,511
161	Esquesing, Halton	3,547	67,524	2,251,166	14,527	4 10	6 5	611	16,695	144	1,190	1,873	3,636	.....	91	24,240
162	Essa, Simcoe	4,150	67,768	1,297,404	13,096	3 16	10.1	1,120	12,001	124	.....	.....	500	.....	.....	13,745
163	Etobicoke, York	3,481	29,093	1,827,840	23,774	6 83	13.0	8,831	22 217	535	1.357	538	2,000	.....	150	35,628
164	Euphemia	2,142	39,160	984,740	9,202	4 30	9.3	609	9,935	118	.....	.....	.....	298	26	10,986

No.	Disbursements, 1900													Assets on December, 31, 1900.					Liabilities on December 31, 1900.				
	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Construction of buildings, water works, etc.	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures	Miscellaneous.	Total disbursements.	Balance on hand	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
131	400	25	299	.....	.....	.....	418	.....	98	.....	1,300	109	167	2,816	496	2,598	290	210	3,594	.....	500	.....	.....	500
132	709	231	1,146	.....	.....	2,544	4,308	.....	.....	.....	1,717	50	245	10 950	442	472	.....	.....	914	.....	.....	.....	125	125
133	869	237	1,842	.....	325	3,032	6,128	113	.....	251	2,500	389	333	16,019	756	.....	.....	700	1,456	.....	6,799	.....	.....	6,799
134	521	92	826	1,015	171	1,382	2,608	.....	.....	90	800	43	194	7,722	520	410	.....	476	1,406	24	360	.....	100	484
135	84	37	211	.....	.....	122	1,609	.....	.....	551	.....	48	12	2,674	223	1,493	252	293	2.261	1,360	256	.....	197	1,753
136	240	54	229	.....	96	1,073	1,650	.....	.....	.....	.....	.....	48	3,390	524	.....	.....	1,000	1,524	.....	.....	.....	.....	.....
137	975	792	6,024	.....	8	5,217	5,525	1,351	.....	2,122	7,500	659	382	30,555	2,305	6,861	.....	3,907	13,073	5,217	13,111	3,185	930	22,443
138	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
139	431	171	1,635	.....	185	1,128	1,865	.....	.....	268	500	76	80	6,339	1,583	1,215	.....	4,024	6,822	1,558	487	1,000	105	3,150
140	679	230	2,325	.....	229	3,382	3,910	1,064	.....	2,393	.....	297	155	14,664	2,093	56	2,421	1,744	6,314	.....	5,914	.....	154	6,068
141	551	182	3,215	.....	.....	2,028	3,049	.....	.....	643	1,200	107	193	11,168	593	37	.....	340	970	.....	1,762	.....	944	2,706
142	431	324	998	98	70	231	2,213	329	1,647	5,150	.....	578	117	12 186	.....	4,805	1,758	3.535	10,098	2,815	9,785	205	.....	12,805
143	659	304	1,701	.....	85	2,651	7,729	448	.....	.....	102	100	78	13,857	.....	7,472	17,877	193	25,542	2,495	.....	2,709	145	5,349
144	436	251	476	.....	52	2 393	4,872	.....	.....	3,000	148	120	5	11,752	1,418	.....	.....	.....	1,418	.....	.....	.....	.....	.....
145	841	369	3,398	...	142	3,824	4,779	914	.....	2,522	950	457	252	18,448	.....	6,969	.....	4,523	11,492	3,753	8,931	753	865	14,302
146	571	116	2,443	.....	24	2,728	4,321	.....	.....	.....	2,110	30	68	12,411	225	20	.....	.....	245	.....	.....	.....	.....	.....
147	744	288	1,993	.....	414	1,618	4,058	4	2,357	112	1,600	590	85	13,863	1,634	.....	4,906	824	7,364	1,618	10,646	.....	200	12,464
148	1,024	697	2,453	1,569	23	1 777	7,215	.....	686	454	...	623	72	16,593	1,609	4,367	7,518	2,403	15,897	3,060	12,000	.....	.....	15,060
149	1,036	2,105	4,151	.....	244	3,091	4,413	7,132	.....	5,214	8,000	1,946	1,441	38,773	2,206	996	.....	10,378	13,580	3,031	24,407	11,800	.....	39,298
150	851	2,330	8,159	.....	66	3 920	5,024	9,299	.....	3,288	...	2,185	2,165	37,287	10,393	333	.....	47,582	58,308	100	43,615	.....	9,998	53,713
151	291	424	330	.....	2	726	1,511	.....	.....	.....	.....	11	29	3,324	532	52	.....	400	984	55	.....	200	.....	255
152	210	52	285	..	29	678	1,675	..	.....	.....	.....	.....	.....	2,929	610	.....	.....	400	1,010	.....	.....	.....	10	10
153	509	65	669	.....	41	642	2,055	.....	.....	200	720	31	3	4 935	.....	1,935	.....	1,000	2,935	607	200	471	...	1,278
154	769	80	5,563	..	201	2,590	4,459	.....	.....	90	...	29	133	13,914	462	.....	.....	623	1,085	.....	623	3,412	.....	4,035
155	254	97	60	.....	.....	.....	425	.....	.....	...	50	21	78	985	304	890	.....	.....	1,194	475	.....	350	.....	825
156	1,555	1,108	5,589	.....	371	2,556	8,706	4,309	.....	7,045	... ..	1,812	1,248	34,299	10,806	29,189	.....	29,082	69,077	5,747	34,641	.....	5,002	45,390
157	197	44	110	.....	15	230	1,088	.....	.....	.....	.....	.....	46	1.730	141	2,519	.....	.....	2,663	1,579	.....	.....	13	1,592
158	679	174	1,558	.....	60	4.330	4,340	.....	.....	.....	.....	.....	467	11.548	425	7,062	.....	4	7,491	5,943	.....	.....	130	6,123
159	761	202	1,512	100	9	5,120	6.326	.....	.....	.....	.....	.....	69	14,099	134	6,177	.....	4	6,311	3,676	.....	.....	4	3,680
160	654	1,140	1,952	...	188	5,663	6,628	.....	2,375	437	785	149	281	20 252	259	4,713	23,106	1,124	29,196	3,223	189	2,250	37	5,699
161	1,057	306	5.408	..	442	2,612	6,623	.....	1,190	.....	3,636	48	387	21.709	2,531	499	39,679	.....	42.709	.....	.....	.....	.....	.....
162	906	109	1,861	213	63	2,725	5,306	.....	.....	678	500	129	196	12,686	1,059	782	.....	1,890	3,731	.....	1,890	.....	105	1,995
163	1,904	1,030	5,472	.....	95	3,477	7,578	.....	896	3,311	.....	1,576	324	25,668	9.965	7,681	13,891	16,908	48,445	6,306	26 512	5,529	365	38,712
164	622	499	1,655	.....	51	1,288	4,103	282	.....	845	.....	204	289	9,838	1,148	3,561	.....	769	5,478	1,294	2,117	1,534	915	5,860

No.	Township Municipalities and Counties in which located.	Population 1901.	No. of acres assessed 1901.	Assessed value of real and personal property and income taxable, 1901.	Taxes imposed for all purposes, 1901. Total.	Per head.	Mills on $.	Receipts, 1900. Balance from 1899.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments.	Interest and dividends	Borrowed for current expenses.	Borrowed on debentures	Miscellaneous.	Total receipts.
					$	$ c.		$	$	$	$	$	$	$	$	$
165	Euphrasia, Grey	3,149	71,979	1,262,670	12,029	3 82	9.5	228	14,097	24	.....	.....	500	.....	36	14,885
166	Faraday, Has ings	1,250	51,891	87,650	3,723	2 98	42 5	402	3,010	165	.....	.....	.....	.....	221	3,798
167	Fenelon, Victoria	2 221	51,442	743,670	8,862	3 99	11.9	528	8,748	49	.....	.....	1,000	900	173	11,398
168	Ferris, Nipissing	795	35,936	65,883	1,744	2 19	26.5	569	2,400	...	.....	.....	.....	.....	140	3,109
169	Finch, Stormont	2,912	51,722	666,060	16,879	5 74	25 3	2,166	13,423	392	.....	.....	3,750	.....	166	19,897
170	Fitzroy, Carleton	2,391	60,322	754,144	9,151	3 83	12 1	218	11,702	58	.....	.....	900	.....	102	12,980
171	Flamboro E., Wentworth	2,428	33,995	1,602,182	9,752	4 02	6.1	971	8,424	285	.....	19	150	....	35	9,884
172	Flamboro W., Wentworth	2,715	31,025	1,275,020	9,978	3 68	7 8	33	10,880	161	2,400	651	1,030	...	128	15,283
173	Flos, Simcoe	3,353	63,726	980 098	16,485	1 92	16.8	1,886	23,845	115	.....	28	1,500	1,400	990	29,764
174	Foley, Parry Sound	503	31,518	81,848	1,103	2 19	13.5	668	825	79	.....	.....	.....	.....	21	1,593
175	Fredericksburg N., Lennox & Addington	1,393	23,634	714,840	6,553	4 70	9 2	1,314	6,781	.....	.....	125	.....	.....	.....	8,220
176	Fredericksburg S., Lennox & Addington	817	20,320	561 750	5,765	7 06	10.2	58	5,468	...	.....	.....	1,300	.....	1	6,827
177	Fullarton, Perth	2,150	40 289	1,904,650	13,640	6 34	7.2	1,831	12,825	64	.....	.....	3,800	...	517	19,040
178	Gainsborough, Lincoln	2,219	39,934	1,053,710	7,618	3 39	7 2	183	8,744	.....	.....	10	200	....	21	9,158
179	Galway and Cavendish, Peterborough	1,130	47,960	58,030	1,451	1 28	25 0	44	1,375	.....	.....	.....	.....	.....	337	1,756
180	Garafraxa E., Dufferin	1,777	39,850	1,116,600	9,666	5 44	8.7	985	10,531	.....	.....	.....	2,500	....	67	14,083
181	Garafraxa W., Wellington	2,305	47,632	1,610,470	11,272	4 89	7 0	1,340	10,761	.....	.....	6	1,769	....	24	13,900
182	Georgina, York	1,629	35,109	646,630	6,017	3 69	9 3	199	6,174	50	.....	.....	500	.....	22	6,945
183	Glamorgan, Haliburton	470	19,017	41,499	1,296	2 76	31 2	29	1,436	38	.....	.....	.....	.....	127	1,5 6
184	Glanford, Wentworth	1,490	23,520	1,062,020	5,558	3 73	5.2	147	6,428	48	1,042	321	.....	.....	.....	7,986
185	Glenelg, Grey	2,721	67,266	666,577	8,723	3 21	13.1	1,718	8,751	42	.....	.....	.....	.....	477	10,988
186	Gloucester, Carleton	6,584	84,684	1,417,275	26,785	4 07	18 9	960	20,765	474	.....	68	1,000	6,521	388	30,176
187	Goderich, Huron	2 399	52,235	1,483,125	9,200	3 83	6 2	2,447	10,202	.....	.....	.....	1,200	.....	15	13,864
188	Gordon, Manitoulin	580	34,423	111,387	2,831	4 88	25 4	352	2,013	.....	.....	.....	.....	.....	.....	2,365
189	Gosfield N., Essex	1,984	27,995	744,905	11,752	5 92	15.8	1,209	12,217	14	.....	119	300	6,695	1,213	21,848
190	Gosfield S., Essex	2,134	30 010	1,040,320	13,908	6 52	13.4	267	16,125	275	.....	40	4,000	1,759	926	23,392
191	Goulbourn, Carleton	2,447	65,125	840,980	11,381	4 65	13.5	1,814	10,587	76	.....	456	375	.....	30	13,338
192	Gower N., Carleton	2,003	33,218	887,875	8,495	4 24	9 6	560	9,794	91	.....	.....	300	.....	48	10,793
193	Gower S., Grenville	802	21,682	313,830	3,074	3 83	9 8	886	2,299	.....	.....	.....	.....	.....	8	3,193
194	Grantham, Lincoln	1 812	19,209	1,280,810	9,551	5 27	7 5	329	9,114	65	.....	9	400	.....	25	9,942
195	Grattan, Renfrew	1,992	60,206	204,290	3,387	1 70	16 6	720	3,8 8	3	.....	.....	.....	600	80	5,241
196	Greenock, Bruce	2,740	64,918	1,411,006	12,549	1 58	8 9	877	10,662	152	232	8	1,000	.....	839	13,170
197	Grey, Huron	3,313	64,887	1,752,525	13,868	4 15	7.9	922	12,946	94	5,848	159	1,700	.....	473	22,142
198	Griffith and Matawatchan, Renfrew	720	23,900	21,400	1,172	1 63	54.8	25	1,176	...	.....	.....	.....	.....	134	1,335

No.	Disbursements, 1900.													Assets on December, 31, 1900.					Liabilities on December, 31, 1900.				
	Allowance, salaries and commissions.	Other expenses of municipal gov'm't.	Roads and bridges.	Construction of buildings, waterworks, &c	Charities	County levy.	Payments on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
165	765	476	2,165	....	242	3,983	6,405	....	....	102	500	47	162	14,847	38	2,214	.....	723	2,975	701	723	.....	90	1,514
166	303	30	354	....	6	232	2,000	....	9	310	.....	77	16	3,337	461	2,103	47	1,368	3,979	1,688	1,101	.....	37	2,826
167	418	124	1,475	....	132	1,718	4,910	....	....	100	1,000	46	340	10,293	1,105	3,690	.....	1,242	6,037	3,627	1,117	200	355	5,299
168	344	143	219	....	.....	....	605	....	.....	22	215	29	47	1,624	1,485	1,234	.....	1,437	4,156	784	533	426	193	1,936
169	673	324	3,948	....	73	1,256	5,320	3,552	.....	1,787	1,625	1,156	80	19,794	103	1,771	.....	4,794	6,668	1,155	22,491	3,365	1,011	28,022
170	763	111	2,176	....	125	2,560	5,625	....	.....	.....	1,200	22	101	12,683	297	6,401	....	800	7,498	3,844	.....	500	.....	4,344
171	602	255	1,615	....	136	2,298	3,493	....	.....	.....	1,025	.....	358	9,782	102	3,039	....	2,100	5,241	2,653	..	152	186	2,991
172	730	592	1,401	300	586	2,110	5,130	.....	2,487	265	830	134	101	14,668	615	1,517	15,343	6,100	23,575	....	265	3,588	87	3,940
173	1,004	609	2,001	....	92	5,474	8,077	677	173	1,951	3,615	1,539	500	25,712	4,052	3,205	1,060	485	8,802	2,003	30,245	....	290	32,538
174	242	56	324	....	15	....	569	....	.....	.....	.....	.....	14	1,220	373	499	.....	.....	872	379	.....	.....	147	526
175	228	131	1,027	....	77	2 369	2,473	....	.....	350	1,288	49	124	8,116	104	1,747	3,500	400	5,751	1,103	.....	.....	.....	1,103
176	258	49	689	....	36	2,406	2,030	....	.....	.....	1,220	.....	96	6,775	52	2,240	2,499	800	5,591	.....	.....	1,185	.....	1,185
177	568	105	6,328	....	.....	3,771	3,718	12	....	.....	3,800	94	184	18,580	460	.....	.....	800	1,260	.....	.....	.....	.....	.....
178	418	113	1,056	....	....	2,276	3,951	.....	.....	.....	200	4	215	8,233	925	855	.....	13	1,793	.....	.....	.....	90	90
179	186	52	1	.....	.....	315	1,040	.....	.....	.....	.....	.....	119	1,713	43	556	.....	.....	599	1,235	.....	.....	125	1,360
180	499	322	2,349	....	35	1,891	3,721	.....	.....	926	2,500	340	120	13,203	880	.....	.....	97	977	.....	5,331	.....	.....	5,331
181	827	130	1,925	....	135	4,068	4,165	24	....	.....	1,769	31	35	13,109	791	4,432	.....	752	5,975	4,001	.....	.....	213	4,214
182	442	94	1,036	....	38	1,399	2,776	....	.....	295	500	53	127	6,760	185	.....	.....	275	460	.....	783	.....	.....	783
183	191	39	87	....	....	317	703	.....	55	40	..	14	60	1,506	24	2,000	109	505	3,238	824	589	.....	164	1,577
184	445	100	283	....	144	1,603	2,736	.....	1,000	....	.....	....	119	6,430	1,556	91	7,300	668	9,618	.....	.....	.....	245	245
185	662	204	2,439	....	167	1,602	4,093	.....	.....	.....	.....	.....	20	9,187	1,801	200	....	1,030	3,031	.....	.....	.....	.....	.....
186	1,656	517	3,568	....	64	4,283	10,825	5,062	86	605	....	450	309	27,425	2,751	19,182	1,139	3,750	26,822	12,091	12,241	2,500	270	27,085
187	611	196	2,418	....	13	2,255	3,957	34	.....	.....	1,200	31	35	10,750	3,114	106	.....	.....	3,220	2,255	.....	.....	.....	2,255
188	277	166	269	....	.....	....	1,250	.....	.....	.....	.....	.....	.....	1,962	403	1,049	.....	.....	1,452	350	.....	.....	.....	350
189	717	1,156	716	....	76	1,377	3,135	9,277	.....	2,362	300	809	376	20,301	1,547	6,822	.....	5,817	14,186	897	20,309	.....	1,365	22,571
190	781	493	1,664	....	353	2,899	4,595	2,574	.....	2,937	4,325	1,286	313	22,220	1,172	9,667	.....	1,195	12,034	899	21,883	4,000	1,568	31,350
191	876	195	1,515	....	73	2,535	4,834	.....	.....	.....	375	.....	209	10,612	2,726	843	7,691	200	11,460	2,020	.....	.....	976	2,996
192	628	418	982	....	70	1,568	4,087	1,151	40	182	....	49	665	9,838	956	2,054	231	2,500	5,720	1,248	1,028	304	.. ..	2,580
193	349	35	292	....	52	755	1,202	36	.....	.....	.....	.....	15	2,736	457	784	.....	.....	1,241	714	.....	.....	.....	714
194	729	326	1,092	.....	.....	3,210	3,075	.....	.....	.....	400	9	216	9,057	885	2,116	.....	8	3,009	2,532	.....	.....	.....	2,532
195	169	28	271	.....	.....	658	2,846	.....	.....	.....	.....	.....	179	4,151	1,096	561	.....	1,023	2,674	617	600	.....	125	1,342
196	687	109	2,854	.....	22	2,562	4,438	.....	240	228	1,000	88	141	12,369	801	404	240	.....	1,445	.....	1,128	.....	.....	1,128
197	812	150	2,531	290	102	2,028	4,807	6,569	.....	1,717	1,700	765	293	21,764	378	1,861	5,239	8,054	15,532	1,000	17,633	....	80	18,713
198	201	78	146	.....	.....	160	709	.....	.....	.....	.....	.....	.....	1,294	41	569	.....	.....	610	523	.....	.....	70	593

No.	Township Municipalities and Counties in which located.	Population, 1901.	No. of acres assessed 1901.	Assessed value of real and personal property and income taxable, 1901.	Taxes imposed for all purposes, 1901.			Receipts, 1900.								
					Total.	Per head.	Mills on $.	Balance from 1899.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	c.		$	$	$	$	$	$	$	$	$
199	Grimsby N., Lincoln	1,174	15,697	847,458	7,413	6 31	8.7	929	7,417	.....	.....	4	1,600	.....	176	10,126
200	Grimsby S., Lincoln	1,359	18,128	584,928	7,618	5 61	13.0	858	6,475	125	.....	...	1,150	...	25	8,633
201	Guelph, Wellington	2,236	36,697	1,504,750	9,208	4 12	6.1	1,052	9,722	141	4,334	534	2,700	.....	217	18,700
202	Gwillimbury E., York	3,166	58,992	1,276,490	12,600	3 98	9 9	1,804	11,830	68	568	618	.....	.....	...	14,888
203	Gwillimbury N., York	1,244	31,577	760,400	5,630	4 53	7.4	437	5,535	58	.....	.....	.....	.....	.....	6,030
204	Gwillimbury W., Simcoe	2,196	46,890	1,044,599	9,486	4 32	9.1	36	10,292	26	.....	.....	800	.....	.....	11,154
205	Hagarty, Jones, etc., Renfrew	2,828	85,267	79,655	4,560	1 61	57.2	100	4,944	232	.....	36	.....	.....	227	5,539
206	Hagerman, Parry Sound	470	18,000	49,768	832	1 77	16.7	345	932	25	.....	.....	.....	.....	192	1,494
207	Haldimand, Northumberland	3,862	76,326	1,731,870	15,226	3 94	8.8	1,443	19,163	137	.....	.....	1,000	.....	206	21,949
208	Hallam, Algoma	320	15,527	100,950	2,012	6 38	20.2	739	2,465	280	.....	.....	.....	.....	.....	3,484
209	Hallowell, Prince Edward	2,846	43,868	1,131,590	6,790	2 39	6.0	315	9,792	20	.....	.....	439	.....	.....	10,566
210	Hamilton, Northumberland	3,758	62,183	1,935,970	13,725	3 65	7.1	371	14,856	121	26	24	.....	.....	142	15,540
211	Harvey, Peterborough	1,095	69,356	176,635	3,718	3 40	21.0	.....	3,508	.....	.....	.....	.....	.....	24	3,532
212	Harwich, Kent	4,534	88,285	3,713,121	29,720	6 55	8.0	6,217	30,304	277	1,000	104	.....	3,152	107	41,161
213	Hawkesbury E., Prescott	4,813	56,532	457,400	11,633	2 42	25.4	31	11,148	223	.....	.....	2,200	1,000	213	14,815
214	Hawkesbury W., Prescott	1,162	28,723	263,447	5,111	4 40	19 4	1,053	5,667	25	.....	.....	600	.....	885	8,170
215	Hay, Huron	3,600	52,497	1,807,150	13,590	3 78	7.5	228	13,124	167	.....	8	1,219	...	245	14,991
216	Head, Clara and Maria, Renfrew	364	14,843	35,975	978	2 69	27.2	23	1,278	74	660	16	.....	.....	45	2,036
217	Hibbert, Perth	2,005	41,432	1,605,935	10,872	5 42	6.8	1,419	11,471	128	.....	.....	.....	2,810	497	16,325
218	Hillier, Prince Edward	1,501	31,541	742,451	6,299	4 20	8.5	2,130	6,543	21	33	18	300	.....	101	9,146
219	Hilton, Algoma	380	27,345	62,128	1,510	3 97	24.3	320	1,409	27	.....	4	.....	.....	.....	1,760
220	Himsworth N., Parry Sound	562	16,211	65,742	1,889	3 36	28.7	182	1,994	118	.....	.....	.....	.....	11	2,305
221	Himsworth S., Parry Sound	1,518	44,526	210,845	3,592	2 63	18 9	119	4,724	354	.....	.....	.....	2,000	19	7,216
222	Hinchinbrooke, Frontenac	1,265	63,673	182,797	5,231	4 14	28.6	139	5,439	60	.....	.....	350	.....	.....	5,988
223	Holland, Grey	3,102	68,330	794,330	9,064	2 92	11.4	505	8,423	148	.....	.....	.....	.....	111	9,187
224	Hope, Durham	3,250	63,925	2,272,128	10,679	3 29	4 7	158	11,028	40	.....	1,564	.....	.....	10	12,800
225	Horton, Renfrew	1,316	38,241	501,691	3,834	2 91	7 6	920	4,544	1	.....	29	.....	.....	110	5,604
226	Houghton, Norfolk	1,957	33,546	462,345	6,668	3 41	14.4	...	6,593	36	.....	.....	586	.....	...	7,215
227	Howard, Kent	3,453	58,390	2,463,705	20,005	5 79	8.2	3,677	21,451	45	.....	65	...	621	769	26,028
228	Howe Island, Frontenac	329	8,231	52,843	1,500	4 56	28.4	251	1,661	.....	.....	.....	25	.....	.....	1,937
229	Howick, Huron	3,838	67,474	2,145,040	16,330	4 25	7.6	370	15,856	118	1,067	228	2,160	6,500	40	26,339
230	Howland, Bidwell and Sheg., Manitoulin	1,138	46,182	133,900	2,580	2 27	19.3	552	2,370	19	.....	.....	250	.....	.....	3,191
231	Hullett, Huron	2,700	53,378	1,907,550	13,304	4 93	7.0	116	12,302	59	3,397	24	1,500	.....	108	17,506
232	Humberstone, Welland	2,866	30,807	908,400	8,911	3 11	9.8	531	8,483	290	.....	.....	.....	.....	32	9,336

No.	Disbursements, 1900.													Assets on December 31, 1900.					Liabilities on December 31, 1900			
	Allowances, salaries and commissions.	Other expenses of municipal gov't.	Roads and bridges.	Construction of buildings, waterworks, &c.	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures	Miscellaneous	Total disbursements.	Balance on hand.	Taxes in arrear.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
199	517	108	2,314	....	57	2,824	2,433	....	.....	84	1,600	85	285	9,807	319	250	.....	1,902	2,471	.....	837	.....	.....	837
200	424	57	901	..	46	1,901	3,878	....	.....	447	150	225	96	8,125	568	86	.....	731	1,325	.....	3,704	1,043	30	4,780
201	742	229	1,765	...	100	4,198	4,019	.....	4,206	.....	2,400	19	438	18,116	584	7,161	14,406	245	22,396	3,468	....	2,700	200	6,368
202	749	998	2,205	....	5	2,994	5,781	....	568	....	81	.....	59	13,440	1,448	125	12,974	300	14,847	.....	....	1,851	....	1,851
203	402	97	647	....	64	1,555	2,469	.....	.....	260	.....	13	157	5,664	366	12	.....	.....	378	.....	.....	.....	.....	.....
204	522	1,156	761	....	118	2,014	4,841	.....	.....	..	800	19	146	10,377	777	651	.....	.....	1,428	.....	.....	.....	80	80
205	410	107	329	....	64	820	2,143	38	36	699	.....	145	133	4,924	615	450	2,786	132	3,933	.....	3,350	850	200	4 380
206	195	93	62	.....	.....	.....	760	..	.....	.....	.....	.....	19	1,129	365	686	.....	740	1,791	494	.....	.....	30	524
207	1,109	203	2,965	..	455	5,327	6,555	.....	.....	50	4,500	60	301	21,525	424	3,492	.....	3,156	7,072	.....	23	1,026	99	1,358
208	229	24	367	....	74	.....	848	.....	.....	266	.....	358	90	2,256	1,228	425	.....	3,656	5,309	.....	3,381	....	50	3,431
209	333	214	1,440	....	430	2,626	5,012	.....	.....	.....	.....	.....	169	10,224	342	155	.....	.....	497	.....	.....	439	.....	439
210	873	303	2,623	....	139	4,207	6,412	.....	.....	.....	200	.....	429	15,186	354	3,299	374	2,095	6,122	870	.....	.....	100	970
211	275	157	225	....	10	371	1,791	.....	.....	131	26	54	97	3,137	395	2,168	.....	817	3 470	1,499	817	.....	250	2,566
212	1,502	2,303	4,417	....	884	5,725	11,758	1,809	..	3 746	..	680	358	33,182	7,979	2,913	.....	16,007	26,899	146	13.016	.....	2,556	15,718
213	565	603	1,009	....	....	1,728	8,665	.....	.....	.....	1,500	73	491	14,634	181	1,922	.....	1,000	3,103	565	1.000	1,219	150	2,934
214	319	398	302	706	..	659	1,925	.....	.....	1,184	300	778	50	6,616	1,554	1,272	.....	7,379	10,205	869	14,289	300	871	16,269
215	587	282	3,049	....	47	1,500	5,246	468	.....	1,420	1,219	341	469	14,628	363	1,155	.....	3,262	4 780	534	6,786	.....	160	7,480
216	295	43	44	.....	.....	.....	853	.....	87	600	.....	36	.....	1,958	78	722	.....	.....	800	214	.....	.....	.....	214
217	568	143	2,987	....	50	3,388	3,827	2,805	.....	519	.....	112	328	14,727	1,598	.....	.....	750	2,348	.....	2,291	.....	.....	2,291
218	389	98	328	....	353	1,675	3,787	....	.....	.....	300	5	107	7,042	2,104	.....	75	1,600	3,779	1,564	.....	.....	.....	1,661
219	233	60	376	.....	.....	.....	430	.....	31	.....	.....	52	134	1,316	444	1,749	120	1,672	3,985	571	1,000	.....	20	1,591
220	230	56	107	....	144	....	851	.....	.....	.....	.....	.....	24	1,412	893	1,051	.....	368	2,312	780	1,249	.....	77	2,106
221	348	110	500	....	72	.....	3,773	.....	.....	370	.....	114	231	5,518	1,698	1,649	.....	10	3,357	1 687	3,576	.....	109	5,332
222	335	418	972	....	4	1,056	2,453	.....	.....	.....	311	.....	39	5,588	40	148	.....	1,000	1,548	.....	.....	361	105	466
223	679	88	859	100	130	1,709	4,511	....	.....	402	.....	63	77	8,618	569	692	.....	360	1,621	.....	977	.....	.....	977
224	925	236	1,726	....	421	2,744	5,506	.....	.....	.....	.....	56	410	12,024	776	2,056	34,368	400	37,600	.....	.....	758	.....	758
225	337	110	411	....	5	856	2,269	.....	.....	110	.....	11	5	4,107	1,497	1,172	.....	1,460	4,129	433	110	.....	.....	543
226	502	116	824	....	45	1,066	3,014	124	.....	506	603	194	221	7,215	.....	1,392	.....	6,204	7,596	755	2,813	86	.....	3,654
227	1,114	300	3,126	..	350	3,716	7,187	1,587	.....	1,903	192	445	876	20,796	5,282	1,430	.....	9,961	16,623	218	8,461	.....	594	9,273
228	109	24	59	....	...	505	745	.....	.....	.....	26	.....	6	1,474	468	.....	.....	.....	468	505	.....	.....	409	914
229	842	224	2,566	....	22	2,605	13,440	179	1,955	.....	1,160	344	92	23,429	2,910	1,756	6,665	8,630	19,961	2,605	21,200	1,660	....	25,465
230	246	49	97	250	30	....	1,988	.....	.....	.....	.....	.....	36	2,696	495	935	.....	363	1,793	.....	.....	250	169	419
231	751	128	3,307	....	5	2,414	4,710	91	3,397	628	1,500	363	91	17,385	121	.....	1,922	.....	2,043	.....	6,822	....	150	6,972
232	622	377	1,102	250	21	2,266	2,820	566	.....	429	.....	95	136	8,684	652	1,371	.....	3,997	6,020	900	1,422	.....	.....	2,322

No.	Township Municipalities and Counties in which located.	Population, 1901.	No. of acres assessed, 1901.	Assessed value of real and personal property and income taxable, 1901.	Taxes imposed for all purposes, 1901.			Receipts, 1900.								
					Total.	Per head.	Mills on $.	Balance from 1899.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from sinking funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	$ c.		$	$	$	$	$	$	$	$	$
233	Humphrey, Parry Sound	609	27,798	124,203	1,642	2 70	13.2	829	1,985	28						2,842
234	Hungerford, Hastings	3,456	93,052	742,476	12,579	3 64	16.9		13,358	307					335	14,000
235	Huntingdon, Hastings	2,368	52,847	434,614	7,537	3 18	17.3	73	8,149	28					247	8,497
236	Huntley, Carleton	2,233	61,869	452,790	8,815	3 95	19.5	1,342	7,668	48					149	9,207
237	Huron, Bruce	2,979	57,985	1,498,010	15,356	5 15	10.3	1,534	14,909	234		38	400		141	17,259
238	Innisfil, Simcoe	3 526	68,662	1,402,204	14,097	4 00	10.1	1,725	14,174	129					168	16,126
239	Jocelyn, Algoma	395	26,746	57,729	1,487	3 76	25 8	518	1,679							2,197
240	Johnson, Tarbutt, etc., Algoma	906	33,458	125,975	2,626	2 90	20.8	297	1,586		100		300			2,283
241	Joly, Parry Sound	280	20,747	47,298	872	3 11	18 4	197	650	2			30		45	824
242	Kaladar and Ang., Lennox and Addington	1,248	58,350	71,554	2,508	2 01	35 1	686	2,769	27					24	3,506
243	Keewatin, Rainy River	933	2,560	271,640	5,083	5 45	18.7	247	5,652	506			173			6,578
244	Kennebec, Frontenac	1,264	42,719	93,259	2,794	2 21	30.0	193	3,169	167					14	3,543
245	Kenyon, Glengarry	4,050	77,998	746,675	10,806	2 67	14.5	574	10,563	235		11	1,839		76	13,298
246	Keppel, Grey	3,467	93,086	724,332	11 881	3 43	16.4	993	11,626	61	395	166			270	13,511
247	Kincardine, Bruce	2,621	59,069	1,567,345	11,435	4 36	7.3	288	10,579	30			2,000	335	383	13,615
248	King, York	5,128	87,556	2,825,325	20,363	3 97	7 2		19,661	477	8,420	2,005	4,205		33	34,801
249	Kingston, Frontenac	2,325	52,120	1,107,184	15,270	6 57	13.8	6,488	14,463	110		142			71	21,274
250	Kinloss, Bruce	2,232	46,113	1,213,724	8,628	3 87	7.1	1,894	8,171	76		20		1,300	220	11,681
251	Kitley, Leeds	1,946	19,046	1,033,515	8,394	4 31	8 1	936	7,632	116		16			18	8,718
252	Laird, Algoma	355	14,959	79,480	1,527	4 36	19 2	107	1,231		155				64	1,557
253	Lanark, Lanark	1,672	57,674	440,380	5,414	3 24	12.3	563	5,962	50						6,575
254	Lancaster, Glengarry	3,654	57,700	926,223	11,174	3 06	12 1	738	10,356	197						11,291
255	Lavant, Lanark	523	44,536	56,400	1,539	2 94	27 3	1	1,748	112					15	1,876
256	Laxton, Digby and Longford	Victoria	720	72,933	74,647	2,365	3 28	31.7	732	2,778		650	390			66	4 616
257	Leeds and Lansdowne Front, Leeds	2,717	56,852	1,043,735	14,875	5 47	14 3	735	12,927	115			2,800		20	16,597
258	Leeds and Lansdowne Rear, Leeds	2,257	45,472	576,566	9,793	4 34	17.0	1,138	7,691	85		82	250			9,246
259	Limerick, Hastings	530	45,481	55,809	1,158	2 18	20.7	210	1,046	28					233	1,517
260	Lindsay and St. Edmunds, Bruce	1,169	121,366	130,425	4,572	3 91	35.1	279	4,506	2	125	37	933			5,882
261	Lobo, Middlesex	2,643	47,287	1,752,940	15,789	5 97	9.0	11,868	15,098	213		173			365	27,717
262	Lochiel, Glengarry	4,476	71,348	995,075	12,475	2 79	12.5	2	11,509	440		33		400	170	12,554
263	Logan, Perth	2,772	53,774	1,898,145	17,285	6 24	9.1		17,220	57	2,260	72	4,816	3,114	791	28,330
264	London, Middlesex	8,397	100,011	4,181,590	38,246	4 55	9.1	14,174	42,045	364		281	14,730		736	72,330
265	Longueuil, Prescott	912	17,381	170,075	2,647	2 90	15.6		2,373	30			152			2,555
266	Loughborough, Frontenac	1,755	51,519	381,952	7,498	4 27	19.6	3	7,836	57		75				7,971

TOWNSHIP MUNICIPALITIES, 1900-1901.—*Continued.*

No.	Disbursements, 1900.													Assets on December 31, 1900.					Liabilities on December 31, 1900				
	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Construction of buildings, waterworks, &c.	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
233	332	117	142	....	83	....	1,123	.....	....	139	....	37	262	2,235	607	763	.....	969	2,339	588	472	.....	.....	1,060
234	803	199	1,009	...	246	3,755	5,632	..	....	193	1,661	24	199	13,721	279	5,940	.....	3,206	9,425	5,105	206	.....	507	5,818
235	616	53	266	28	73	3,667	3,427	.....	....	100	.....	24	19	8,273	224	3,222	.....	800	4,246	2 623	300	.....	.....	2,923
236	852	82	1,345	41	44	1,923	3,049	.....	.....	67	....	25	550	7,978	1,229	1,143	.....	1,400	3,772	1,546	349	.....	75	1,970
237	776	472	5,499	...	31	3,206	5,780	.....	.....	397	400	126	183	16,870	389	2,221	.....	800	3,410	.....	1,743	.....	.....	1,743
238	1,011	329	2,559	...	237	2,881	6,001	.....	.....	350	....	84	72	13,524	2,612	1,206	.....	.....	3,818	.....	1,074	.....	.....	1,074
239	190	117	491	....	....	....	912	.....	28	....	....	42	.....	1,780	417	162	242	858	1,679	56	600	.....	.....	656
240	258	78	252	....	....	....	684	..	.....	100	300	38	170	1,880	403	1,206	.....	400	2,009	600	400	200	50	1,250
241	142	40	34	....	5	....	370	....	....	.....	156	5	24	776	48	562	.....	.....	616	284	.....	31	28	343
242	235	194	151	....	..	448	1,606	.....	.....	.....	200	28	233	3,095	411	1,809	.....	408	2,628	1,603	..	100	69	1,772
243	448	232	2,516	....	27	....	2,345	..	.....	443	.....	354	213	6,578	.....	538	.....	600	1,138	.....	6,218	173	82	6,473
244	335	37	250	..	72	620	1,791	.....	.....	.....	.....	.....	72	3,177	366	2,187	.....	610	3,163	2,427	.....	.....	169	2,596
245	634	294	1,929	....	78	1,362	7,044	265	..	....	1,363	.....	329	13,298	.....	2,574	.....	1,578	4,152	.....	.....	1,844	18	1,862
246	977	224	2,878	...	185	1,246	4,657	76	433	551	1,000	404	301	12,927	584	7,554	1,073	43	9,254	2,666	8,678	.....	237	11,581
247	648	150	2,942	....	57	2,607	4,344	281	.....	....	2,000	50	100	13,179	436	830	.....	406	1,662	505	335	.....	.....	840
248	1,235	624	4,692	....	69	5,814	9,860	....	9,665	399	1,800	142	501	34,801	.....	2,185	41,153	2,548	45,886	.....	573	4,119	156	4,848
249	579	11	1,319	167	143	7,046	4,625	29	.....	.....	.....	.....	257	14,176	7,098	2,207	1,650	1,646	12,601	7,046	.....	.....	473	7,519
250	577	342	1,768	....	47	2,020	4,718	354	.....	130	....	17	62	10,035	1,646	12	.....	2 191	3,849	.....	1,170	.....	....	1,170
251	600	159	1,546	...	52	1,622	3,973	.....	.....	.....	.....	.....	43	7,995	723	43	.....	2,000	2,766	.....	.....	.....	.....	.....
252	143	85	99	....	5	.....	650	.....	.....	80	300	62	19	1,443	114	327	.....	1,066	1,507	.....	630	.....	121	751
253	374	144	468	....	15	927	2,978	.....	.....	217	.....	60	95	5,278	1,297	443	.....	1,800	3,540	.....	983	.....	370	1,353
254	764	115	1,753	....	17	1,741	5,802	80	.....	.....	.....	.....	348	10,620	671	4,957	.....	.....	5,628	1,505	.....	.....	.....	1,505
255	289	56	161	....	....	133	1,138	.....	.....	.....	.....	.....	84	1,851	25	105	.....	.....	130	.....	.....	.....	.....	.....
256	209	53	337	....	....	218	1,371	.....	1,544	.....	.....	251	34	4,017	599	.....	7,001	.....	7,600	.....	5,000	.....	.....	5,000
257	744	235	4,709	....	34	1,932	5,587	.....	.....	.....	2,800	60	191	16,292	305	340	.....	5,000	5,645	..	.....	.....	80	80
258	673	52	1,388	....	11	1,213	4,832	.....	234	.....	250	255	188	9,096	150	788	2,988	.....	3,926	.....	5,000	.....	60	5,060
259	124	50	358	....	..	102	620	.....	.....	.....	.....	.....	1	1,250	267	1,345	..	285	1,897	879	.....	.....	311	1,190
260	586	282	960	11	10	224	2,006	.....	.....	.....	900	53	735	5,767	115	4,425	150	46	4,736	1,080	.....	2,369	239	3,688
261	881	213	3,815	....	181	4,363	4,670	161	.....	277	.....	157	625	15,343	12,374	.....	.....	4,462	16,836	4,283	3,146	.....	.....	7,429
262	748	1,128	1,177	....	170	1,500	7,143	.....	46	.....	.....	20	616	12,548	6	11,565	138	70	11,779	8,571	630	.....	921	10,122
263	939	336	5,231	....	5	3,561	4,800	4,606	....	1,424	5,200	683	159	26,944	1,386	221	.....	2,838	4,445	.....	14,556	.....	193	14,749
264	1,875	742	21,823	....	522	9,405	11,329	.....	.....	226	14,730	255	2,158	63,065	9,265	10,018	.....	3,234	22,517	9,558	1,234	.....	...	10,792
265	172	14	151	....	1	227	1,721	132	.....	....	120	6	11	2,555	.....	1,523	.....	.....	1,523	1,244	.....	152	.	1,396
266	458	160	781	79	76	2,430	3,557	.....	.....	258	.....	44	105	7,948	23	3,853	.....	.....	3,876	2,171	602	.....	459	3,232

No.	Township Municipalities and Counties in which located.	Population 1901.	No. of acres assessed 1901.	Assessed value of real and personal property and income taxable, 1901.	Taxes imposed for all purposes, 1901. Total.	Per head.	Mills on $.	Receipts 1900. Balance from 1899.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	$ c.		$	$	$	$	$	$	$	$	$
267	Louch, Lincoln	1,694	18,573	730,565	9,510	5 61	13.0	201	7,938	30	.....	56	.....	.....	189	8,414
268	Luther E., Dufferin	1,631	38,527	817,155	8,432	5 17	10.3	938	8,590	20	.....	.....	1,000	1,256	130	11,934
269	Luther W., Wellington	2,068	49,737	861,950	9,321	4 51	10 8	2,640	10,539	31	.....	.....	1,000	702	795	15,707
270	Lutterworth, Haliburton	402	23,040	36,548	1,265	3 15	34 6	220	1,618	.....	.....	.....	.....	.....	49	1,887
271	McDougall, Parry Sound	474	27,372	66,263	1,754	3 70	26.5	181	2,163	15	.....	.....	1,176	.....	26	3,561
272	McGillivray, Middlesex	2,862	66,772	2,029,950	16,575	5 79	8 2	871	15,369	30	.....	11	3,500	900	105	20,786
273	McIrvine (Fort Frances), Rainy River	386	3,941	152,599	3,798	9 84	24.9	414	4,769	586	.....	84	500	.....	..	6,353
274	McKellar, Parry Sound	607	27,935	75,310	1,994	3 29	26 5	100	1,901	28	.....	.....	.....	.....	7	2,036
275	McKillop, Huron	2,615	52,162	2,004,400	10,583	4 05	5.3	1,046	11,316	34	.....	706	1,028	4,884	410	19,424
276	McKim, Nipissing	2,519	13,154	140,245	7,871	3 12	56 1	479	3,933	151	.....	.....	.....	.....	18	4,581
277	McLean and Ridout, Muskoka	715	43,778	102,076	1,725	2 41	16.9	445	1,499	58	.....	.....	.....	.....	101	2,103
278	McMurrich, Parry Sound	613	39,708	110,162	2,056	3 35	18.7	307	2,166	34	.....	.....	.....	.....	230	2,737
279	McNab, Renfrew	3,445	62,496	1,125,582	8,891	2 58	7.9	1,190	9,130	81	.....	26	.....	.....	111	10,538
280	Macaulay, Muskoka	626	37,112	95,367	2,693	4 30	28.2	143	1,951	21	.....	.....	200	.....	15	2,330
281	Macdonald Meredith, & Aberdeen, Algoma	700	19,850	70,221	1,769	2 53	25 2	288	1,321	.....	.....	.....	.....	.....	.....	1,609
282	Machar, Parry Sound	805	35,795	93,615	2,191	2 72	23.4	287	2,401	42	.....	.....	.....	.....	36	2,766
283	Madoc, Hastings	2,231	67,747	495,119	11,387	5 10	23.0	.....	13,116	.....	.....	16	.....	.....	287	13,419
284	Maidstone, Essex	3,012	44,443	826,117	16,917	5 62	20.5	289	17,558	210	.....	.....	3,500	2,533	135	24,225
285	Malahide, Elgin	3,592	62,381	1,922,560	21,936	6 11	11.4	4,229	24,761	21	.....	5	6,000	1,059	717	36,792
286	Maldeu, Essex	1,369	20,855	710,970	7,235	5 28	10.2	238	7,785	49	.....	.....	1,600	.....	1	9,673
287	Manvers, Durham	2,933	69,675	851,268	10,773	3 67	12.7	960	11,221	166	.....	.....	494	.....	52	12,893
288	Mara, Ontario	2,931	61,472	954,480	9,834	3 36	10.3	718	10,696	198	.....	.....	3,000	.....	.....	14,612
289	March, Carleton	849	27,965	370,055	4,147	4 88	11.2	562	3,133	16	.....	24	.....	.....	35	3,770
290	Mariposa, Victoria	3,795	74,985	2,590,641	19,909	5 25	7.7	10,612	19,612	12	.....	127	.....	.....	433	30 796
291	Markham, York	5,278	66,037	3,203,270	24,657	4 67	7.7	7,361	22,173	175	.....	.....	.....	.....	145	29,857
292	Marlborough, Carleton	1,524	56,997	484,265	6 314	4 16	13.1	245	4,341	24	.....	.....	919	.....	.....	5,529
293	Marmora and Lake, Hastings	1,577	106,860	244,874	5,623	3 57	23 0	23	9,126	239	.....	.....	960	.....	405	10,753
294	Maryborough, Wellington	2,999	56,445	1,732,820	15,812	5 27	9.1	5,008	14,852	83	.....	4	2,000	600	214	22,761
295	Marysburg N., Prince Edward	1,219	23,769	452,400	3,788	3 11	8.4	54	4,112	.....	.....	.....	300	.....	.....	4,466
296	Marysburg S., Prince Edward	1,177	23,494	349,875	3,533	3 00	10.1	288	3,818	.....	524	170	.....	.....	156	4,956
297	Mattawan Nipissing	259	12,398	24,185	479	1 85	19.8	63	472	.....	.....	.....	.....	.....	2	537
298	Matchedash, Simcoe	439	19,130	56,495	1,115	2 54	19.7	709	582	.....	108	11	.....	.....	13	1,423
299	Matilda, Dundas	3,833	62,602	1,325,625	18,200	4 75	13.7	.....	21,829	2	.....	.....	8,171	1,400	64	31,466
300	Mayo, Hastings	510	19,731	27,450	1,465	2 87	53.4	215	1,390	.....	.....	.....	.....	.....	222	1,827

TOWNSHIP MUNICIPALITIES, 1900-1901.—*Continued.*

No.	Disbursements, 1900.													Assets on December, 31, 1900.				Liabilities on December, 31, 1900.			
	Allowance, salaries and commissions.	Other expenses of municipal gov'm't.	Roads and bridges.	Construction of buildings, waterworks, &c	Charities.	County levy.	Payment on account of schools and education	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and dep sits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
267	398	131	1,551	....	36	2,676	3,027	.....	...	345	.....	17	192	8,373	41	1,600	....	147	1,788	201	.....	.....	75	276
268	393	538	878	....	5	1,467	4,125	398	.....	1,376	1,000	547	121	10,858	1,076	630	....	524	2,230	.....	10,074	.....	28	10,102
269	606	173	1,009	250	5	5,225	3,358	630	50	634	1,000	58	184	13,182	2,625	799	250	300	3,874	303	7,634	.....	75	8,012
270	160	44	126	..	24	174	845	.....	.....	..	..	41	1,414	473	667	..	....	291	1,431	389	.....	.....	21	410
271	239	90	169	....	5	....	1,419	.....	.....	...	1,176	47	38	3,183	378	1,115	.....	50	1,543	.....	.....	300	..	300
272	779	208	6,232	....	5	2,551	6,948	.....	.....	.....	3,500	100	193	20,516	270	31	....	2,000	2,301	.....	900	.....	..	900
273	563	152	1,188	..	81	.....	1,320	.....	584	40	850	141	221	5,140	1,213	8,003	584	360	5,160	.....	2,422	548	277	3,247
274	230	64	270	....	5	.....	1,102	.....	.....	100	..	36	30	1,837	199	1,465	....	232	1,896	844	500	....	59	1,403
275	811	281	4,286	....	47	2,350	4,600	1,496	.....	266	1,028	293	194	15,652	3,772	3	11,582	6,330	21,687	....	6,260	....	1,918	8,178
276	654	156	827	....	75	....	1,925	.....	.....	122	.....	41	108	3,908	673	4,110	....	927	5,710	2,514	565	.....	.....	3,079
277	191	85	202	..	5	....	872	.....	.....	212	.....	71	189	1,827	276	.....	.....	1,000	1,276	.....	830	.....	.....	830
278	206	171	251	.....	....	....	1,147	.....	.....	73	.....	36	108	1,892	745	2,591	.....	309	3,645	1,059	522	.....	.....	1,581
279	658	126	1,953	..	92	1,610	4,164	.....	.....	213	.....	31	47	8,794	1,744	1,641	....	1,184	4,569	866	425	.....	214	1,505
280	309	81	675	....	5	.....	930	.....	.....	.....	.....	.....	68	2,068	262	871	....	243	1,376	607	..	418	122	1,207
281	135	26	221	....	2	.....	728	.....	.....	.....	.....	.....	58	1,170	439	561	....	25	1,025	.....	.....	.....	.....	.....
282	176	43	212	....	61	.....	1,270	.....	.....	66	.....	83	48	1,959	807	1,040	....	235	2,082	805	1,312	....	253	2,370
283	547	121	378	..	105	3,165	4,448	.....	.....	1,136	1,138	1,332	69	12,429	990	4,656	.....	650	6,296	.....	30,864	.....	.....	30,864
284	850	245	2,408	..	467	2,265	4,538	2,950	.....	4,273	3,500	1,029	1571	24,086	139	16,666	.....	1,778	18,583	6,488	12,959	3,556	..	23,003
285	1,203	3,000	7,207	....	60	5,783	6,762	1,454	.....	1,519	6,000	647	514	34,149	2,643	1,214	.....	514	4,371	.....	12,720	.....	584	13,304
286	520	171	2,134	....	39	1,310	2,709	.....	.....	68	1,981	100	285	9,417	256	4,421	.....	938	5,615	2,398	250	1,653	100	4,401
287	789	384	1,916	....	359	1,733	5,747	.....	.....	243	494	42	354	12,061	832	177	.....	24	1,033	.....	905	.....	75	980
288	954	279	3,243	....	204	1,000	4,299	152	.....	293	3,465	220	132	14,241	371	.....	.....	3,862	4,233	.....	2,294	.....	.....	2,294
289	345	86	408	....	15	889	1,593	31	.....	.....	.....	.....	4	3,371	399	1,478	460	1,000	3,277	886	.....	.....	.....	886
290	1,188	198	3,474	....	506	4,871	8,292	183	.....	930	.....	401	323	20,316	10,480	146	.....	7,722	18,348	4,874	8,427	.....	66	13,367
291	1,234	556	4,370	....	184	6,735	10,277	.....	.....	219	.....	166	218	23,959	5,898	1,178	.....	1,565	8,641	7 054	1,565	.....	525	9,144
292	655	51	373	261	15	1,166	2,637	48	.....	147	86	12	178	5,529	...	1,790	.....	261	2,051	923	156	833	340	2,252
293	615	.....	1,122	....	256	1,676	4,083	.....	.....	325	1,678	226	469	10,390	363	3,781	.....	2,239	6,383	1,972	2,239	960	239	5,410
294	791	173	2,983	.....	14	4,974	7,116	30	.....	365	2,000	145	146	18,740	4,021	678	.....	388	5,087	4,109	1,595	.....	161	5,865
295	251	136	147	69	111	952	2,175	.....	.....	.....	300	..	215	4,356	110	111	6,899	1,100	8,223	63	.....	.....	2	65
296	210	147	378	.....	137	907	2,103	.....	55	....	684	70	23	4,714	242	76	9,383	856	10,551	.....	.....	1,265	.....	1,265
297	89	23	42	.....	.....	.....	183	.....	.....	.....	.....	.....	200	537	.....	514	....	151	665	529	.....	170	76	775
298	151	48	233	.....	.....	221	320	.....	.....	108	.....	11	10	1,102	321	340	156	..	817	482	157	.....	.....	639
299	456	228	2,055	....	461	2,515	8,542	4,514	.....	3,427	8,040	919	284	31,466	...	3,386	.....	3,516	6,902	3,030	14,699	2,631	878	21,238
300	283	120	279	....	.....	81	901	.....	.....	110	....	20	....	1,797	30	1,196	.....	170	1,396	797	170	.....	230	1,197

TOWNSHIP MUNICIPALITIES, 1900-1901.—*Continued.*

No.	Township Municipalities and Counties in which located.	Population, 1901.	No. of acres assessed, 1901.	Assessed value of real and personal property and income taxable, 1901.	Taxes imposed for all purposes, 1901.			Receipts, 1900.								
					Total.	Per head.	Mills on $.	Balance from 1899.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	$		$	$	$	$	$	$	$	$	$
301	Medonte, Simcoe	3,917	66,244	564,099	12,258	3 38	23 5	2,031	11,756	139	....	53	....	.....	442	14,421
302	Medora and Wood, Muskoka	909	58,400	233,739	4,824	5 31	20 6	463	3,917	143	150	4	.....	.....	251	4,928
303	Melancthon, Dufferin	3,747	74,663	1,789,490	14,288	3 81	8 0	.....	13,681	.....	.....	.....	3,500	.....	139	17,320
304	Mersea, Essex	4,159	61,898	1,822,502	28,076	6 75	15 4	.....	30,862	96	.....	.....	4,500	2,694	288	38,440
305	Metcalfe, Middlesex	1,516	36,194	1,002,095	11,267	7 43	11 2	2,417	7,330	21	310	18	.....	1,669	479	12,244
306	Middleton, Norfolk	2,485	45,053	757,905	10,127	4 08	13 4	683	9,542	30	.....	28	.....	2,104	584	12,971
307	Minden, Haliburton	1,170	35,770	85,884	3,351	2 86	39 0	17	4,037	12	.....	.....	600	.....	208	4,874
308	Minto, Wellington	2,994	69,386	1,848,865	13,256	4 43	7 2	1,015	12,135	88	21	36	1,000	4,293	265	18,853
309	Monaghan N., Peterborough	911	13,950	596,225	4,130	4 53	6 9	1,461	4,795	.....	.....	.....	1,300	.....	109	7,665
310	Monaghan S., Northumberland	855	18,330	508,695	3,338	3 90	6 6	638	3,526	37	1,850	27	400	.....	16	6,494
311	Monck, Muskoka	935	28,431	200,216	3,135	3 35	15 7	625	2,646	33	.....	.....	.....	.....	163	3,467
312	Monmouth, Haliburton	538	22,387	28,025	2,021	3 76	72 1	61	1,913	.....	.....	.....	.....	.....	3	1,977
313	Mono, Dufferin	3,480	69,825	1,535,595	11,546	3 32	7 5	288	12,849	45	.....	.....	1,500	.....	.....	14,682
314	Montague, Lanark	1,833	62,056	583,893	6,890	3 76	11 8	763	6,571	7	.....	.....	270	.....	5	7,616
315	Monteagle and Herschel, Hastings	1,961	67,332	70,024	3,392	1 73	48 4	.....	2,583	50	.....	.....	.....	.....	387	3,020
316	Moore, Lambton	4,401	73,395	1,830,335	27,328	6 21	14 9	2,054	27,674	323	.....	.....	.....	2,233	78	32,362
317	Morningtoп, Perth	2,966	50,030	1,738,900	18,286	6 17	10 5	1,945	16,789	304	.....	22	905	228	565	20,758
318	Morris, Huron	2,407	55,136	1,803,041	9,411	3 91	5 2	1,785	10,481	34	.....	11	1,500	.....	42	13,853
319	Morrison, Muskoka	813	28,428	80,040	1,594	1 96	19 9	6	1,790	26	.....	1	.....	.....	151	1,974
320	Mosa, Middlesex	2,476	47,226	581,920	13,328	5 38	22 9	1,111	12,228	.....	.....	.....	1,000	967	86	15,392
321	Moulton, Haldimand	1,826	27,000	596,305	6,517	3 57	10 9	.....	5,326	.....	132	221	2,091	.....	85	7,855
322	Mountain, Dundas	2,931	58,107	1,342,665	16,412	5 60	12 2	3,330	12,220	305	.....	.....	2,967	.....	83	18,905
323	Mulmur, Dufferin	2,752	69,386	1,331,650	12,552	4 56	9 4	554	14,336	13	.....	.....	1,000	.....	2	15,905
324	Murray, Northumberland	2,755	48,550	1,178,675	10,446	3 79	8 9	715	9,202	72	.....	.....	150	.....	.....	10,139
325	Muskoka, Muskoka	799	31,354	96,265	1,942	2 43	20 2	643	1,775	.....	.....	.....	.....	.....	83	2,501
326	Nairn and Lorne, Algoma	186	11,041	46,521	1,129	6 07	24 3	175	358	100	.....	.....	.....	.....	10	643
327	Nassagaweya, Halton	2,269	44,794	1,010,320	7,672	3 38	7 6	30	8,376	43	.....	559	.....	.....	79	9,087
328	Neebing, Thunder Bay	218	126,909	190,315	4,224	19 37	22 2	589	4,171	35	.....	43	2,030	.....	708	7,576
329	Nelson, Halton	2,688	46,341	1,790,530	12,963	4 82	7 2	897	11,501	50	352	975	.....	.....	53	13,828
330	Nepean, Carleton	5,282	58,031	2,349,324	18,864	3 57	8 0	2,083	16 828	248	.....	803	272	.....	314	20,548
331	Niagara, Lincoln	1,697	22,471	913,625	9,803	5 78	10 7	227	9,005	90	.....	4	2,662	.....	31	12,019
332	Nichol, Wellington	1,691	26,692	1,082,375	7,019	4 15	6 5	560	7,773	67	.....	17	.....	800	131	9,348
333	Nipissing, Parry Sound	303	28,707	103,915	1,376	4 54	13 2	289	931	39	.....	.....	.....	.....	.....	1,259
334	Nissouri E., Oxford	2,374	46,476	2,123,125	12,913	5 44	6 1	823	12,183	190	.....	9	1,500	5,500	668	20,873

No.	Disbursements, 1900.												Assets on December 31, 1900.					Liabilities on Dec. 31, 1900.			
	Allowances, salaries and commissions.	Other expenses of municipal government	Roads and bridges.	Construction of buildings, water works, etc.	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures out standing.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
301	925	231	2,270	.....	209	2,773	5,512	423	.....	484	.....	136	1	12,964	1,457	2,062	.....	3,040	6,559	.....	2,343	.....	80	2,423
302	328	357	977	....	10	.....	2,378	.....	.....	350	60	69	38	4,567	361	4,879	.....	200	5,440	2,708	800	.....	1,110	4,618
303	561	340	1,607	....	14	5,500	5,767	67	95	642	1,500	426	217	16,736	584	1,274	2,049	1,272	5,179	368	6,034	2,000	.....	8,402
304	1,864	876	3,588	.....	538	2,896	8,111	4,383	....	9,774	1,322	2,875	725	36,452	1,988	19,215	.....	6,605	27,808	3,097	16,924	4,500	3,450	57,971
305	575	377	1,790	..	56	2,453	4,332	378	310	689	500	119	266	11,845	399	6,028	.....	2,300	8,727	2,408	1,651	.....	173	4 232
306	682	434	1,849	....	44	2,958	3,911	700	....	350	.....	185	144	11,257	1,714	3,804	.....	2,725	8,243	733	5,970	.....	.....	6 703
307	324	72	379	..	7	1,733	2,118	.....	.....	84	.....	57	65	4,869	5	2,352	.....	866	3,223	1,621	866	600	33	3,120
308	964	301	2,730	215	17	3,925	5,297	964	7	....	1,000	22	112	15,554	3,299	2,277	7	1,282	6,865	3	4,293	.....	140	4,436
309	333	117	1,310	.....	55	1,224	1,415	.....	.....	41	1,300	34	30	5,859	1,806	.....	.....	1,429	3,235	1,336	.....	.....	128	1,464
310	279	23	605	.....	.....	802	1,661	.....	370	2,000	400	45	110	6,295	199	217	.....	.....	416	.....	.....	.....	.....	.....
311	306	81	658	.....	.....	.....	1,250	.....	.....	230	.....	93	90	2 708	759	71	.....	.....	830	.....	1,648	.....	.....	1,648
312	195	186	8	.....	5	471	901	.....	40	.....	.....	54	67	1,927	50	2,391	80	420	2,944	1,381	500	400	16	2,297
313	773	251	1,671	....	25	2,624	6,480	.....	.....	.....	2,000	36	12	13,872	810	.....	.....	.....	810	.....	.....	.....	15	15
314	414	152	932	....	..	1,334	4,533	42	.....	.....	.....	1	6	7,414	202	796	.....	1,000	1,998	.....	.....	270	.....	270
315	262	71	261	..	8	188	1,705	.....	.....	108	345	60	6	3,009	11	3,250	.....	890	4,151	2,073	890	.....	375	3,338
316	1,291	541	3,397	.....	540	2,996	7.098	4,226	.....	7,336	.....	2,076	256	29,767	2,605	18,759	.....	29,937	51,301	6,040	31,484	3,060	1,450	42,034
317	759	423	3,644	..	38	3,678	5,287	83	.....	1,888	905	1,390	320	18,415	2,343	.....	.....	.....	2,343	.....	32,758	.....	.....	32,758
318	761	96	1,496	174	6	1,992	4,104	870	.....	.....	1,500	29	156	11,184	2,669	743	.....	970	4,382	1,992	.....	.....	.....	1,992
319	183	76	305	.....	43	.....	1,062	.....	.....	.....	.....	.....	6	1,675	299	1,022	.....	12	1,333	813	.....	.....	1	814
320	740	211	2,087	.....	29	3,107	3,780	1,666	.....	1,950	.....	326	1,021	14,917	475	5,997	.....	922	7,394	3,213	5,576	1,000	992	10,781
321	382	196	368	.....	75	997	2.691	2,001	.....	.....	851	.....	294	7,855	.....	275	4,394	94	4,763	.....	.....	2,091	..	2,091
322	424	129	3,341	.....	108	3,406	6,951	2,567	.....	.....	1,000	..	150	18,076	829	1,836	520	1,000	4,185	1,182	.....	2,969	..	4,451
323	763	364	1,629	.....	40	2,720	6,224	...	.....	1,600	1,000	221	244	14,805	1,100	1,893	9,000	600	12 593	2,618	1,600	.....	.....	4,218
324	735	119	1,150	.....	66	1,566	4,686	.....	.....	250	150	27	207	8,956	1,183	2,406	.....	2,250	5,839	1,495	250	.....	50	1,795
325	287	52	604	.....	60	....	863	.....	.....	.....	.....	.....	34	1,900	601	610	.....	...	1,211	357	.....	.....	40	397
326	275	85	.....	.....	.....	.....	200	.....	.....	.....	.....	24	5	589	54	1,287	.....	.....	1,341	.....	.....	300	.....	300
327	610	131	2,138	.....	249	1,106	3,174	.....	59	.....	.....	.....	302	7.769	1,318	2,601	9,101	1,200	14,220	212	.....	.....	.....	212
328	1,065	256	1,025	.....	70	.....	282	.....	427	.....	2,816	637	915	7,493	83	4,988	1,912	1,001	7,984	258	10,500	146	679	11,583
329	1,042	228	3,286	.....	407	1,974	5,710	.....	57	.....	.....	57	300	13 661	767	243	26 264	3,300	30,574	.....	.....	.....	.....	.....
330	1,428	676	2,171	.....	626	4,416	9,474	561	.....	325	.....	150	721	20,548	....	15,766	9,500	6,794	32,060	11,023	2,600	272	7	13,902
331	551	334	2,822	.....	10	3,294	1,879	.....	.....	.....	2,600	79	450	12,079	...	6,842	.....	145	6,987	6,247	.....	62	.....	6,309
332	713	66	745	.....	5	3.050	3,667	.....	.....	.....	.....	.....	62	8,308	1,040	3,253	.....	.....	4,293	2,519	800	.....	117	3,436
333	177	34	106	.....	5	.....	712	.....	.....	.....	.....	50	3	131	1,218	41	1,106	.....	35	1,182	.....	.....	84	84
334	532	106	3,950	.....	.....	3,447	10,291	.....	.....	.....	1,500	32	71	19,929	944	225	.....	5,500	6,669	.....	5,500	.....	.....	5,500

TOWNSHIP MUNICIPALITIES, 1900-1901.—*Continued.*

No.	Township Municipalities and Counties in which located.	Population, 1901.	No. of acres assessed, 1901.	Assessed value of real and personal property and income taxable, 1901.	Taxes imposed for all purposes, 1901.			Receipts, 1900.								
					Total.	Per head.	Mills on $.	Balance from 1899.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures	Miscellaneous	Total receipts.
				$	$	$	$	$	$	$	$	$	$	$	$	$
335	Nissouri W., Middlesex	2,821	49,500	1,461,275	17,821	6 32	12.2	252	15,650	69	.....	.....	4,000	.....	83	20,054
336	Normandy, Grey	4,399	68,144	1,479,000	13,715	3 12	9 3	1,077	14,112	244	.....	.....	.....	.....	214	15 647
337	Norwich N., Oxford	2,189	33,869	1,514,560	12,884	5 89	8 5	1,558	13,077	11	.....	21	1,000	2,918	134	18,719
338	Norwich S., Oxford	2,387	35,941	994,386	10,947	4 59	11.0	2,198	9 889	77	127	35	1,500	187	40	14,053
339	Nottawasaga, Simcoe	5,252	90,202	2,573,348	20 826	3 97	8.1	2,089	22,704	264	.....	.....	1,000	.....	832	26,889
340	Oakland, Brant	700	10,414	395,720	3,641	5 20	9 2	492	3,330	6	.....	116	.....	.....	3	3,947
341	Oakley, Muskoka	336	22,836	38,165	963	2 87	25 2	16	1,079	1	.....	.....	.....	.....	28	1,124
342	Olden, Frontenac	1,029	49,084	106,941	4,176	4 04	38 9	110	4,251	19	138	.....	151	.....	8	4,677
343	Oliver, Thunder Bay	413	28,846	110 910	2,013	4 87	18.1	421	1,473	40	.....	.....	.....	.....	14	1,948
344	Oneida, Haldimand	1,365	32,466	955,500	6,695	4 90	7.0	1,429	6,979	.....	.....	.....	.....	.....	27	8,435
345	Onondaga, Brant	1,069	20,569	706,551	5 086	4 76	7.2	1,032	5,173	44	14	.....	250	.....	15	6,528
346	Ops, Victoria	2,176	56,356	1,563,555	13,672	6 28	8 7	7,240	14,781	.....	.....	87	.....	4,687	360	27,155
347	Orford, Kent	2,613	49,691	1,424,985	15,303	5 86	10.7	3,152	15,583	91	.....	.....	9,700	646	110	29,282
348	Orillia, Simcoe	3,663	73,112	563,114	12,931	3 53	23.0	116	12,078	77	.....	.....	4,300	.....	525	17,096
349	Oro, Simcoe	3,880	73,228	1,064,415	10,672	2 75	10.0	2,786	11,727	167	.....	60	.....	.....	264	14,944
350	Osgoode, Carleton	4,667	91,153	1,514,600	17,345	3 82	11.8	873	16,029	957	.....	24	1,700	800	204	20,587
351	Osnabruck, Stormont	4,706	62,040	1,177,173	15,650	3 33	13.3	1,183	15,278	248	.....	.....	4,659	.....	1,429	22,797
352	Oso, Frontenac	1,060	42,297	90,459	3,601	3 40	39.8	12	3 826	114	.....	.....	.....	.....	190	4,142
353	Osprey, Grey	3,119	70,660	823,565	8,900	2 85	10 8	.....	11,030	76	.....	.....	1,045	.....	12	12,163
354	Otonabee, Peterborough	3 249	64,641	1,977,038	15,555	4 79	7 9	2,908	14,338	30	.....	12	500	.....	394	18,182
355	Oxford-on-Rideau, Grenville	2,695	59,364	787,985	10,572	3 92	13 4	832	8,573	79	1,830	15	1,000	.....	2	12,331
356	Oxford E., Oxford	1,930	34,547	1,480,505	9,759	5 06	6.6	1,361	7,892	247	.....	55	.....	.....	15	9,570
357	Oxford N., Oxford	1,267	21,128	876,682	7,376	5 82	8.4	.....	8,517	141	17	.....	500	2,666	108	11,949
358	Oxford W., Oxford	2,062	25,861	1,102,595	8,827	4 28	8.0	893	9,291	640	.....	40	.....	3,398	252	14 514
359	Pakenham, Lanark	1,921	56,081	620,167	8,137	4 24	13.1	448	7,062	78	.....	.....	291	.....	22	7,901
360	Palmerston and Canonto, Frontenac	1,076	56,521	63,654	2,656	2 47	41.7	264	2 237	44	.....	.....	.....	.....	45	2,590
361	Papineau, Nipissing	593	23,834	57,861	858	1 45	14.8	13	809	.....	.....	.....	.....	.....	.....	822
362	Peel, Wellington	3,842	74,399	1,912,170	17,410	4 53	9.1	430	17,629	284	.....	.....	2,000	.....	74	20,417
363	Pelee Island, Essex	643	9,869	287,269	8,283	12 88	28.8	210	8,716	35	.....	253	2,722	4 955	450	17,341
364	Pelham, Welland	2,336	28,800	983,570	9,833	4 21	10.0	913	9,423	1	3,490	1,199	800	.....	344	16,170
365	Pembroke, Renfrew	622	8,542	179,659	1,683	2 71	9.4	32	2,001	.....	.....	.....	.....	.....	.....	2,033
366	Percy, Northumberland	2,907	51,331	972,625	11,492	3 95	11.8	.....	11,498	149	.....	.....	2,660	.....	15	14,322
367	Perry, Parry Sound	1,224	44,331	224,594	3,542	2 89	15.8	1,266	3,354	211	.....	.....	.....	.....	.....	4,831
368	Petewawa, Renfrew	993	28,572	44,596	1,691	1 70	37.9	145	1,510	25	.....	.....	.....	.....	87	1,767

No.	Disbursements, 1900.													Assets on December 31, 1900.					Liabilities on December 31, 1900.			
	Allowances, salaries and commissions.	Other expenses of municipal gov't.	Roads and bridges.	Construction of buildings, waterworks, etc.	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
335	840	144	2,452	....	54	4,474	4,831	37	.....	.....	3,000	69	188	16,089	3,965	5,308	....	9,273	4,397	....	3,836	.....	8,233
336	946	539	2,229	....	181	2,795	7,318	.....	.....	.....	.....	.....	170	14,208	1,439	138	.....	1,000	2,577	.....	.....	.....	.....
337	645	73	3,334	....	27	2,511	4,545	3,361	....	413	1,000	102	187	16,197	2,522	177	....	300	2,999	....	2,505	1,096	3,601
338	453	324	3,749	....	14	1,886	4,218	387	.....	346	1,500	70	240	13,187	866	40	.....	2,722	3,628	....	802	2	804
339	1,453	492	4,818	....	55	4 610	7,766	....	.....	319	2,500	82	658	22,753	4,136	1,171	....	880	6,187	1,681	802	696	3,179
340	273	49	165	....	66	596	1,369	....	.....	500	.....	225	65	3,308	639	59	4,544	700	5,942	....	4,000	....	4 000
341	185	21	248	....	....	....	317	....	.....	.....	.....	.....	44	818	306	810	....	....	1,116	412	.....	....	412
342	346	113	220	....	68	719	2,714	.....	138	.....	.....	.....	359	4,677	....	1,775	....	1,348	3,123	1,861	.....	151	21	2,036
343	276	74	334	....	10	....	540	.....	74	.....	.....	100	126	1,534	414	1,310	1,529	1,100	4,353	.....	2,000	.....	.....	2,000
344	437	76	2,458	....	233	1,970	3,073	....	.....	.....	.....	.....	238	7,485	950	....	....	500	1,450	....	.....	.....	.....	.....
345	437	90	1,311	250	204	1,182	2,089	....	.....	10	.....	.....	149	5,721	807	35	10	3,250	4 102	.....	.....	250	.....	250
346	683	380	3,794	....	248	3,070	4,242	4,577	1,104	804	.....	325	372	19,599	7,556	93	1,104	4,205	12,958	3,053	7,349	.....	1,103	11,545
347	1,092	433	2,684	250	393	2,132	7,758	1,911	.....	2,235	4,700	668	726	24,882	4,400	7,304	.....	4 869	16,564	1,600	11,528	5,000	300	18,428
348	1,115	547	3,784	....	80	1,904	3 859	.....	.....	364	1,600	329	76	13,658	3,438	4,048	....	1,124	8,610	2,947	3,559	3,700	131	10,337
349	810	209	1,218	....	8	4,872	5,645	.....	.....	200	.....	12	36	13,010	1,934	2,907	....	1,368	6,209	2,525	.....	.....	.....	2,525
350	889	334	3,378	....	31	4,000	7,909	690	178	1,190	515	437	736	20,287	800	....	15,796	3,700	19,796	575	7,446	1,700	....	9,721
351	576	537	2,789	368	320	2,080	8,415	4,250	....	1,499	....	1,259	535	22,658	139	3,416	....	1,479	5,034	1,887	16,783	4,700	465	23,835
352	342	119	179	.....	52	730	1,930	.....	.....	52	.....	8	634	4,046	96	926	....	500	1,522	776	97	....	120	993
353	764	207	1,337	.....	249	3,170	5,185	.....	.....	213	669	93	276	12,163	....	2,931	....	....	2,931	1,251	1,512	745	500	4,008
354	506	233	3,363	....	401	4 429	5,552	.....	.....	.....	500	8	37	15,029	3,153	4,872	....	3,500	11,525	4 862	.....	.....	477	5,339
355	735	731	936	61	20	2,104	5,161	382	15	....	1,011	65	168	11,382	949	1,297	410	6,000	8,656	2,003	832	.....	.....	2,835
356	564	79	2,321	.....	....	2,576	3,589	148	.....	.....	.....	.....	72	9,348	222	2,950	....	608	3,780	5	.....	....	64	69
357	518	93	1,418	....	32	1,497	4,156	1,878	34	....	853	13	87	10,578	1,370	12	34	1,700	3,116	....	2,666	.....	.....	2,666
358	588	1,086	1,276	.....	50	1,867	3,377	2,909	.....	....	.....	.....	68	11,220	3,294	604	....	2,596	6,494	....	3,398	....	5	3,403
359	535	290	1,041	....	60	1,176	3 011	.....	...	300	291	142	67	6,913	988	610	....	3,500	5,098	21	2,500	...	120	2,641
360	295	58	189	....	86	142	1,109	.....	.....	100	.....	80	129	2,188	402	502	.....	138	1,042	234	1,500	....	.....	1,734
361	154	28	1	.....	....	....	536	.....	.....	.....	43	1	..	763	59	593	.....	....	652	432	....	....	140	572
362	909	200	2,005	....	9	5,545	7,535	.....	.....	346	2,000	257	386	19,192	1,225	13	.....	17	1 255	....	3,988	....	148	4,136
363	568	260	931	.....	....	....	1,797	3,407	.....	1,037	2,500	1,357	386	12,243	5,098	6 578	....	37,500	49,176	784	24 246	4,522	2,400	31,952
364	618	219	2,725	....	51	2 554	4,160	....	3,490	....	1,088	24	96	15,035	1,135	853	18,000	4,500	24,488	....	....	1,359	5	1,364
365	207	13	87	...	....	244	939	.....	.....	.....	.....	.....	..	1,490	543	721	...	150	1,414	898	.....	.....	.....	898
366	644	201	2,643	....	206	1,555	4,857	.....	.....	209	3,754	58	195	14,322	....	512	....	8,400	8,912	.....	766	112	17	895
367	370	103	453	....	45	....	2,068	.....	.....	311	....	134	219	3,703	1,128	2,953	....	3	4,084	835	1,933	.....	43	2,811
368	243	63	135	.....	....	150	639	....	.....	118	.....	....	16	1,364	403	628	.....	200	1,231	243	200	.....	.....	443

No.	Township Municipalities and Counties in which located.	Population, 1901.	No. of acres assessed, 1901.	Assessed value of real and personal property and income taxable, 1901.	Taxes imposed for all purposes, 1901.			Receipts, 1900.								
					Total.	Per head.	Mill on $.	Balance from 1899.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from sinking funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	$		$	$	$	$	$	$	$	$	$
369	Pickering, Ontario	5,211	71,482	3,379,595	26,093	5 01	7.7	..	26,531	404	.....	.....	8,800	.....	77	35,812
370	Pilkington, Wellington	1,353	29,139	1,043,486	7,875	5 82	7.5	262	8,356	19	.....	.....	1,500	.....	138	10,275
371	Pittsburg, Frontenac	2,159	48,132	810,972	13,345	6 18	16.5	5,611	12,437	128	.....	26	.....	.....	.....	18,202
372	Plantagenet N., Prescott	4,116	51,161	418,950	11,173	2 71	26 7	233	10,438	313	.....	.....	.....	700	318	12,002
373	Plantagenet S., Prescott	3,365	48,791	385,450	9,013	2 68	23.4	61	10,685	236	.....	.....	300	.....	.....	11,282
374	Plummer Additional, Algoma	649	16,681	117,919	4,003	6 17	33.9	1,219	1,870	257	.....	.....	.....	.....	3	3,349
375	Plympton, Lambton	3,306	75,015	2,047,620	20,596	6 23	10 1	1,270	19,583	102	.....	.....	1,000	2,269	391	24,615
376	Portland, Frontenac	2,104	52,933	461,901	8,611	4 09	18 6	1,069	8,981	81	500	68	.....	.....	122	10,821
377	Prince, Algoma	204	26,255	46,573	972	4 76	20.9	168	455	.....	.....	.....	.....	.....	.....	623
378	Proton, Grey	2,931	81,182	829,075	9,786	3 34	11.8	867	10,224	81	.....	.....	.....	860	219	12,251
379	Puslinch, Wellington	2,739	58,516	1,461,195	10,596	3 87	7.3	341	10,778	186	2,189	490	.....	.....	204	14,188
380	Radcliffe and Raglan, Renfrew	1,185	39,927	83,550	2,367	2 00	28 5	28	2,183	31	.....	.....	.....	.....	9	2,251
381	Rainham, Haldimand	1,676	25,662	539,450	5,757	3 43	10 7	937	6,346	89	.....	211	915	.....	31	8,529
382	Raleigh, Kent	4,597	71,425	2,520,440	34,449	7 49	13.7	..	34,580	191	.....	149	4,073	4,942	292	44,207
383	Rama, Ontario	1,237	34,081	150,136	3,332	2 69	22.2	86	3,326	22	2,903	82	300	.....	379	7,098
384	Ramsay, Lanark	2,096	61,421	679,890	10,301	4 91	15.2	1,057	9,904	69	.....	571	8,000	11,500	11	31,112
385	Ratter and Dunnett, Nipissing	890	22,000	46,435	2,695	3 03	58 0	3	1,950	208	.....	.....	19	400	.....	2,580
386	Rawdon, Hastings	3,160	66,500	1,169,153	13,504	4 27	11 6	*878	13,783	170	.....	24	.....	.....	368	15,223
387	Rayside, Algoma	760	20,500	72,097	1,634	2 15	22.7	....	2,053	42	.....	.....	400	.....	10	2,505
388	Reach, Ontario	3,439	63,363	1,974,461	13,044	3 79	6.6	1	13,766	26	.....	.....	3,800	.....	204	17,797
389	Richmond, Lennox and Addington	2,261	49,858	859,340	10,691	4 73	12.4	....	11,095	29	9,794	591	.....	.....	33	21,542
390	Roche ter, Essex	2,480	32,497	953,780	10,947	4 41	11.5	1,016	11,477	219	.....	.....	460	1,129	124	14,455
391	Rolph, Buchanan and Wylie, Renfrew	1,029	41,910	58,811	2,118	2 06	36.0	6	1,877	16	1,300	.....	.....	.....	.....	3,199
392	Romney, Kent	1,752	24,778	737,785	15,917	9 09	21.6	748	15,345	4	.....	27	2,000	4,344	1,415	23,883
393	Ross, Renfrew	2,254	51,348	552,830	6,103	2 71	11.0	248	6,890	149	.....	.....	400	.....	5	7,672
394	Roxborough, Stormont	4,274	71,515	771,055	17,142	4 01	22.2	....	17,222	324	802	.....	265	.....	2,370	20,983
395	Russell Russell	2,958	47,450	659,125	12,718	4 30	19 3	22	11,109	250	.....	19	.....	15,540	420	27,360
396	Ryde, Muskoka	576	23,666	48,128	1,215	2 11	25.2	174	1,120	.....	.....	.....	.....	.....	.....	1,294
397	Ryerson, Parry Sound	743	42,107	135,014	2,108	2 84	15.6	320	2,232	2	.....	.....	.....	.....	13	2,567
398	St. Joseph, Algoma	1,099	28,116	119,070	2,946	2 68	24.7	252	2,735	70	.....	.....	.....	1,700	270	5,027
399	St. Vincent, Grey	2,823	63,647	1,387,351	14,182	5 02	10.2	4,081	12,690	.....	.....	.....	1,800	1,000	103	19,674
400	Salter, May and Harrow, Algoma	736	42,815	207,158	2,248	3 05	10 9	683	2,220	140	.....	9	133	.....	34	3,219
401	Saltfleet, Wentworth	3,110	28,302	1,781,999	14,946	4 81	8.4	912	14,603	153	355	333	3,000	4,000	454	23,810
402	Sandfield, Manitoulin	255	13,908	31,151	687	2 69	22.1	675	578	.....	.....	.....	.....	.....	20	1 273

No.	Disbursements, 1900.													Assets on December 31, 1900.				Liabilities on December 31, 1900.			
	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Construction of buildings, waterworks, &c.	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
369	1,485	450	7,983	93	1,026	3,238	9,486	....	..	1,259	8,226	625	1,236	35,107	705	1,579	....	4,793	7,077	1,851	7,693	800	178	10,422
370	646	73	1,269	....	20	3,428	3,006	....	.....	.....	1,485	79	121	10,127	148	3,533	.....	.....	3,681	1,700	.....	1,305	239	3,244
371	632	132	3,376	..	....	5,124	4,564	24	.....	.....	.....	..	53	13,905	4,297	2,633	.....	.....	6,930	5,242	.....	.....	110	5,352
372	687	176	1,666	....	130	1,086	5,681	....	.....	.....	.....	45	174	9 998	2,004	5,909	....	2,183	10,096	3,538	2,886	.....	1,154	7,578
373	883	183	1,682	....	....	1,273	5,290	569	.....	353	.....	....	609	10,573	769	4,013	....	956	5,672	3,724	171	800	160	4,855
374	297	38	222	....	130	.....	1,089	....	.....	.....	.....	.....	169	1,945	1,404	51	....	250	1,705	841	.....	.....	..	841
375	1,002	271	3,816	..	217	4,487	7,260	1,293	.....	3,370	1,000	739	336	23,791	824	6,568	....	15,507	22,899	1,571	14,636	.....	51	16,258
376	664	113	942	....	75	3,691	3,513	....	.....	.....	.....	.....	61	9,059	1,762	2,740	3,750	1,000	9,252	3,683	.....	.....	....	3,683
377	111	34	23	....	....	.....	162	....	.....	.....	.....	.....	.....	330	293	287	.....	.....	580	.....	.....	100	....	100
378	652	318	1,358	....	25	1,825	4,893	281	201	483	....	283	97	10,416	1,835	1,939	1,406	284	5,464	165	5,566	181	..	5,912
379	799	178	1,377	....	103	2,075	5,058	....	2,164	.....	.....	.....	176	11,930	2,258	1,927	10,083	3,000	17,268	2,279	.....	.....	95	2,374
380	266	47	221	....	5	201	1,501	....	.....	.....	.....	.....	6	2,247	4	2,405	.....	.....	2,409	1,398	.....	.....	..	1,398
381	401	67	1,951	....	69	1,991	2,954	....	.....	.....	500	8	26	7,967	562	.....	4,640	850	6,052	.....	.....	415	..	415
382	1,174	1,004	2,185	....	268	4,314	6,773	6,993	.....	9,918	6,183	4,978	417	44,207	.....	16,943	.....	85,978	102,921	.....	99,871	4,073	3,920	107,864
383	441	149	810	....	17	186	1,626	....	183	3,000	300	134	18	6,864	234	1,767	....	745	2,746	660	.....	634	136	1,430
384	757	6,661	2,876	....	40	1,723	4,396	....	830	.....	10,000	482	126	27,890	3,222	41	8,490	600	12,353	375	11,500	.....	....	11,875
385	203	90	14	....	....	.....	1,892	....	.	52	.....	60	269	2,586	....	400	.....	1,528	1,928	.....	1,528	19	....	1,547
386	713	196	785	....	379	6,048	6,243	....	.....	.....	.....	19	122	14,505	718	4,280	.....	2,600	7,598	3,186	1,400	.....	50	4,636
387	219	36	502	100	....	.....	731	94	.....	.....	608	.....	215	2,505	.....	1,221	.....	600	1,821	861	.....	215	210	1,286
388	1,052	277	2,026	....	618	....	6,333	....	1,400	.....	5,687	103	270	17,766	31	1,026	1,400	1,730	4,187	2,314	.....	.....	100	2,414
389	589	221	1,870	....	177	2,109	4,853	....	9,736	.....	1,483	66	176	21,280	262	4,268	17,633	2,300	24,463	3,157	.....	1,000	2	4,159
390	823	282	1,164	....	161	1,590	4,230	2,429	.....	1,435	.....	199	1,874	14,187	268	9,484	.....	.....	9,752	3,137	11,392	460	100	15,089
391	245	66	43	....	....	130	2,509	....	100	.....	.....	66	....	3,149	50	2,0 9	107	1,481	3,667	1,540	1,400	.....	264	3,204
392	1,043	168	1,222	153	63	1,039	2,833	5,851	....	5,025	2,005	2,255	863	22,520	1,363	11,550	.....	8,530	21,443	2,119	44,726	2,000	1,028	49,873
393	393	119	721	....	....	1,214	3,501	....	.....	100	400	38	298	6,784	888	190	.....	1,600	2,678	638	400	.....	....	1038
394	567	288	2,059	....	104	1,308	6,897	3,357	.....	2,861	892	1,714	400	20,447	536	8,396	.....	600	9,532	2,617	39,350	265	....	42,232
395	1,501	381	2,638	....	100	1,140	4,114	5,267	353	446	.....	447	364	16,751	10,609	7,585	1,025	1,000	20,219	3,590	26,733	.....	618	30,941
396	208	64	109	....	5	.....	650	.....	.....	38	.....	15	...	1,089	205	982	.....	2,260	3,447	.....	227	.....	200	427
397	269	95	261	....	5	.....	997	.....	.....	183	.....	38	22	1,870	697	2,120	.....	.....	2,817	1,185	354	.....	144	1,683
398	344	116	497	1,286	....	.....	2,250	.....	.....	58	.....	30	155	4,736	291	1,641	.....	2,290	4,222	650	2,060	....	50	2,760
399	914	247	2,542	....	415	5,084	6,832	.....	.....	196	1,800	51	70	18,175	1,499	84	.....	2,184	8,767	60	2,160	.....	249	2,469
400	226	142	207	....	2	..	1,471	....	270	600	50	109	142	3,219	.....	811	756	2,305	3,872	961	1,500	133	...	2,594
401	1,235	662	3,074	....	370	2,474	9,217	95	637	.....	3,000	436	329	21,529	2,281	.....	6,970	255	9,506	2,071	6,000	..	....	8,071
402	142	18	10	....	5	.....	812	.....	.....	.....	64	.....	10	1,061	212	226	.....	58	496	286	.....	.....	7	292

No.	Township Municipalities and Counties in which located.	Population, 1901.	No. of acres assessed, 1901.	Assessed values of real and personal property and income taxable, 1901.	Taxes imposed for all purposes, 1901.			Receipts, 1900.								
					Total.	Per head.	Mills on $.	Balance from 1899.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Fun s and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	$ c.		$	$	$	$	$	$	$	$	$
403	Sandwich E., Essex	2,487	18,792	628,895	14,196	5 71	22 6	3	13,853	514		6	5,075	1,551	437	21,439
404	Sandwich S., Essex	1,623	23,480	588,654	10,5 0	6 47	17 8	379	11,695	110			2,000	2,541	358	17,083
405	Sandwich W., Essex	2,473	23,811	691,013	11,563	4 68	16 7	97	12,710	540			1,100	488	822	15,757
406	Sarawak, Grey	1,255	10,824	264 624	4,923	3 92	18 6	9.5	4,567		472	127		1,700	35	7,856
407	Sarnia, Lambton	1,467	36,061	839 870	5,354	3 65	6.4	811	5,678	26		7	400		379	7,301
408	Saugeen, Bruce	2,06.	38,353	774,044	15,532	7 54	20.1		13,855	70		1	3,050		435	17,411
409	Sault Ste. Marie, Algoma	933	45,626	795,917	10,750	11 52	13.5	1,662	6,809	22			500		41	9,034
410	Scarborough, York	3,576	42,542	2,085,038	17,357	4 85	8.3	465	17,342	416	313	600			37	19,173
—	Schreiber, Thunder Bay	378	312	82,500	1,238	3 28	15 0			Organized in 1901.						
411	Scott, Ontario	2,117	49,196	1,027,250	9,183	4 34	8.9	435	9,375	58		289	2,3.0		47	12,504
412	Scugog, Ontario	464	9,308	278,585	1,937	4 17	7.0	214	1,919	25						2,158
413	Sebastopol, Renfrew	725	30,156	53,622	1,282	1 77	23 9	78	1,354						10	1,442
414	Seneca, Haldimand	1,762	41,839	883,040	8,165	4 63	9.2	1,278	8,289	59		18			18	9,662
415	Seymour, Northumberland	3,042	66,471	1,118,375	13,532	4 45	12.1	1,347	12,511	10			4,650		76	18,594
416	Sheffie'd, Lennox and Addington	2,023	63,520	673,139	7,243	3 58	10 8	124	8,843	159	9,377	925	7,000	8,500	151	35,079
417	Sherbourne, McClintock, etc., Ha iburton	302	9,779	18,830	984	3 26	52 3	316	424	35	448	4		1,000	849	3,066
418	Sherbrooke, Haldimand	398	4,668	151,220	1,155	2 90	7 6	147	1,300	18	50	136				1,651
419	Sherbrooke S., Lanark	850	36,407	90,371	1,778	2 09	19 7	419	1,877	27			15		23	2,361
420	Shuniah, Thunder Bay	151	94,483	135,015	2 362	15 61	17 5	1,520	2,132			39	167		677	4,535
421	Sidney, Hastings	3,880	69,577	2,058,600	19,572	5 04	9.5	13	20,468	67			2,000		701	23,249
422	Smith, Peterborough	2,589	57,820	1,457,935	12,171	4 70	8.3	647	12,635	151		50		1,700		14,983
423	Snowdon, Haliburton	698	33,758	68,721	2,427	3 48	35.3		3,634				618		354	4,006
424	Scotbra, Lambton	3,837	70,653	1,022,080	21,010	5 48	20 5	712	23,327	188		47		8,410	154	32,838
425	Somerville, Victoria	1,865	63,534	204,340	6,184	3 32	30 3	109	5,675	60	668	268		1,000	469	8,249
426	Sophiasburg, Prince Edward	1,728	42,951	977,044	7,648	4 43	7 8	163	7,089	69		207	500		7	8,035
427	Southwold, Elgin	3,839	72,488	2 415,142	23,020	6 00	9 5	8,279	23,584	198			4,000		372	36,383
428	Springer, Nipissing	1,016	32,150	67,100	3,092	3 04	46 1	44	3 635	50					377	4,106
429	Stafford, Renfrew	1,097	21,320	235,380	2,563	2 34	10 9	136	3,037	5					3	3,181
430	Stamford, Welland	1,902	21,225	844 890	10,327	5 43	12.2	1,095	10,688	122		39			10	11,954
431	Stanhope, Haliburton	473	16,121	24,784	1,133	2 40	45.7	63	1,734						206	2,003
432	Stanley, Huron	2,138	43,318	1,666,900	10,865	5 08	6 5	487	9,377	127	1,250	19			113	11,373
433	Stephen, Huron	4,141	66,787	1,805,325	15,299	3 69	8 5	1 789	13,508	392	293		2,425		586	18,793
434	Stephenson, Muskoka	1,106	43,556	135,886	4,461	4 03	32.8	204	3,039	81		11	681		133	4,152
435	Stisted, Muskoka	629	41,845	107,643	2,029	3 23	18 8	71	1,866	4	120	2			109	2,172
436	Storrington, Frontenac	1,821	55,964	417,935	8,639	4 74	20.7	130	8,182	25					1	8,338

TOWNSHIP MUNICIPALITIES, 1900-1901.—*Continued.*

No.	Disbursements, 1900.													Assets on December 31, 1900.				Liabilities on December 31, 1900.				
	Allowances, salaries, and commissions.	Other expenses of municipal government.	Roads and bridges.	Construction of buildings, waterworks, &c.	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits	Miscellaneous.	Total assets.	County levy and school rates due and unpaid	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
403	922	289	1,354	...	232	1,422	3,801	2,745	.....	3,122	4,785	1,052	1,121	20,818	591	13,301	.....	13,495	27,387	5,148	15,812	4,000	781	25,741
404	578	730	1,485	...	105	1,070	2,705	2,124	.....	4,418	1,800	688	820	16,523	560	10,012	.....	7,888	18,460	3,055	11,603	2,000	1,051	17,109
405	647	262	3,184	...	214	1,377	4,968	749	.....	1,846	1,300	382	557	15,426	331	14,092	.....	1,218	15,641	6,548	7,063	.....	2,091	15,702
406	452	256	867	256	27	409	1,707	34	655	112	240	392	2,111	7,512	344	906	1,860	1,573	4 683	.....	10,438	.....	.....	10,438
407	835	1,802	1,593	...	430	1,250	3,536	1,233	...	4,541	547	1,336	169	17,272	139	3,689	.....	16,048	19,867	.....	24,392	4,250	.....	28,642
408	531	152	1,576	...	90	1,594	2,237	85	...	115	406	27	82	6,889	412	12	.....	401	825	.....	382	.....	18	400
409	757	459	3,462	83	81	.....	1,750	.....	.....	.....	500	.....	642	7,744	1,290	8,463	.....	2,484	12,237	1,684	.....	.....	419	2,103
410	1,094	697	4,914	...	45	4,245	6,607	.....	296	177	.....	386	124	18,565	608	1,333	13,125	6,253	21,319	.....	5,393	.....	.....	5,393
411	650	1,149	1,131	265	407	1,396	4,083	.....	.....	200	2,300	97	97	11,775	729	21	4,761	.....	5,511	.....	585	.....	.....	585
412	199	50	169	25	5	334	1,179	.....	.....	.....	.....	.....	57	2,018	140	.....	.....	1,500	1,640	.....	.....	.....	96	96
413	142	27	112	..	..	158	904	.....	.....	.....	.....	.....	14	1,357	85	332	.....	.....	417	320	.....	.....	.....	320
414	493	109	1,142	..	129	2,446	3,775	.....	.....	.....	.....	.....	263	8,357	1,305	15	.....	1,550	2,870	.....	.....	.....	.....	.....
415	741	241	4,476	....	149	1,744	4,858	.....	.....	.....	.....	.....	474	18,439	155	799	.....	90	1,044	.....	.....	950	248	1,198
416	520	160	562	....	104	3,365	3,861	...	907	15,285	9,295	1,019	32	35,050	29	2,709	....	2,000	4,738	868	8,215	.....	594	9,677
417	161	64	564	....	5	31	1,133	.....	.....	.....	.....	.....	.....	1,958	1,108	245	.....	1,000	2,353	355	1,000	.....	67	1,422
418	155	76	114	....	51	333	886	.....	5	.....	.....	.....	1	1,615	36	453	1,845	600	2,934	.....	.....	.....	.....	.....
419	297	71	117	..	4	209	1,543	.....	.....	.....	.....	.....	120	2,361	.....	456	.....	.....	456	.....	.....	15	33	48
420	359	406	852	....	....	.....	.....	.....	206	.....	1,500	375	635	4,333	202	8,058	1,926	4,216	14,402	.....	7,560	387	631	8,518
421	1,263	214	2,314	....	770	9,070	5,805	.....	...	200	2,307	154	27	22,124	1,125	10,675	.....	1,712	13,512	9,585	712	.....	...	10,297
422	547	115	2,211	....	276	.....	5,753	.....	.....	300	...	103	50	9,353	5,630	1,887	.....	.....	7,517	3,788	1,200	.....	27	5,015
423	248	163	166	....	3	1,536	1,261	.....	.....	150	.....	22	457	4,006	.....	2,678	.....	1,164	3,842	1,782	266	636	74	2,758
424	971	329	3,014	....	587	1,688	7 455	6,323	15	8,979	.....	2,045	396	31,802	1,036	21,258	265	31,568	54,127	7,180	38,898	.....	.....	46,078
425	477	157	605	....	176	492	3,256	.....	1,495	.....	.....	500	442	7,600	649	5,276	6,052	1,400	13,377	2,942	11,000	.....	120	14,062
426	479	203	517	....	158	2,159	3,768	.....	.....	.....	500	22	17	7,823	212	79	3,416	3,500	7,207	106	.....	.....	284	390
427	976	703	6,288	....	30	7,270	7,675	172	.....	1,674	3,000	341	242	28,371	8,012	2,636	.....	3,335	13,983	7,950	4,849	1,013	1,875	15,687
428	288	176	1,082	..	40	.....	967	.....	.....	403	.....	226	35	3,217	889	2,681	....	1,377	4,947	665	4,092	.....	1,225	5,982
429	168	47	140	....	..	1,006	1,402	.....	.....	.....	54	.....	43	2,854	327	555	....	750	1,632	30	.....	200	95	325
430	536	260	1,090	....	66	2,028	4,528	.....	.....	.....	.....	20	549	9,077	2,877	2,105	....	10,067	15,049	2,240	6,030	803	867	9,940
431	212	65	142	....	5	78	645	.....	.....	47	.....	18	340	1,552	451	606	....	347	1,404	230	253	337	35	855
432	530	218	2,518	...	....	2,063	4,369	.....	1,250	.....	.....	.....	88	11,036	337	127	1,000	1,240	2,704	.....	.....	.....	.....	.....
433	815	243	2,955	...	21	2 188	6,011	66	..	1,594	2,425	472	459	17,249	1,544	1,268	.....	4,110	6,922	2,188	6,642	.....	21	8,851
434	299	149	947	....	17	....	1,496	.....	439	.....	.....	165	96	3,608	544	1,785	1,691	1,679	5,699	1,065	2,090	1,251	429	4,835
435	371	35	485	....	.....	.....	741	...	90	120	.....	43	39	1,924	248	232	360	1,060	1,900	.....	690	.....	...	690
436	413	172	487	...	48	3,721	3,197	...	.....	.....	.....	.....	71	8,109	229	1,409	....	1,000	2,638	753	.....	.....	.....	753

No.	Township Municipalities and Counties in which located.	Population, 1901.	No. of acres assessed, 1901.	Assessed value of real and personal property and income taxable, 1901.	Taxes imposed for all purposes, 1901.			Receipts, 1900.								
					Total.	Per head.	Mills on $.	Balance from 1899.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from sinking funds and other investments	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	$ c.		$	$	$	$	$	$	$	$	$
437	Strong, Parry Sound	719	38,810	133,525	1,930	2 68	14.5	21	2 590	10	.....	.....	.....	.....	47	2,668
438	Sullivan, Grey	3,314	73,023	1,171,450	11,612	3 50	9 9	70	10,668	24	.....	.....	1,650	.....	198	12,610
439	Sunnidale, Simcoe	1,933	54,944	814,356	8,374	4 33	10 3	3,082	8,018	174	.....	.....	1,500	.....	104	12,878
440	Sydenham, Grey	3,322	73,209	1,187,650	14,294	4 30	12.0	.....	13,021	51	.....	.....	347	.....	95	13,514
441	Tay, Simcoe	4,545	45,204	644,755	11,608	2 55	18.0	878	9,965	135	.....	125	.....	2,000	306	13,409
442	Tecumseth, Simcoe	3,009	65,942	1,664,910	18,810	6 26	11.3	2,153	17,876	121	2,094	.....	3,100	1,300	347	26,991
443	Tehkummah, Manitoulin	479	19 639	51,600	1,030	2 15	20 2	10	1,185	.....	.....	.....	.....	.....	.....	1,195
444	Thessalon, Algoma	650	18,427	55,838	1,529	2 35	27.4	365	1,264	.....	.....	.....	.....	.....	.....	1,629
445	Thorah, Ontario	1,285	31,897	603,705	6,019	4 68	10.0	.....	5,404	30	275	1,506	.....	.....	129	7,344
446	Thorold, Welland	1,895	22,671	632,663	7,238	3 82	11.4	74	6,486	97	.....	.....	600	.....	.....	7,257
447	Thurlow, Hastings	3,894	53,388	1,918,650	17,635	4 53	9.2	27	18,083	102	.....	.....	.....	.....	630	18 842
448	Tilbury E., Kent	3,366	53,676	1,545,275	31,634	9 40	20.5	331	28,968	.....	.....	432	.....	39,885	1,357	70,973
449	Tilbury N., Essex	2,053	26,743	648 270	12,696	6 18	19.6	2,331	11,272	113	.....	46	.....	1,311	434	15,507
450	Tilbury W., Essex	2,027	22,374	639,000	16,840	8 31	26.4	.....	15,221	296	.....	.....	15,729	3,613	2,102	36,961
451	Tiny, Simcoe	3,886	77,916	965,828	12,439	3 19	12.9	1,021	14,326	24	.....	.....	500	.....	366	16,237
452	Torbolton, Carleton	934	25,649	142,850	3,374	3 61	23.6	223	2,636	.....	.....	.....	.....	.....	.....	2,859
453	Toronto, Peel	4,967	64,949	2,724,400	22,071	4 44	8.1	2,538	18,164	292	4,748	1,015	3,000	.....	35	29,792
454	Toronto Gore, Peel	956	18,982	692,460	5,536	5 79	8.0	211	5,446	27	6	154	1,515	.....	112	7,471
455	Tossorontio, Simcoe	1,557	44,599	730,998	6,462	4 14	8 8	1,185	5,992	129	.....	.....	.....	.....	50	7,356
456	Townsend, Norfolk	3,899	64,951	2,374,700	17,254	4 43	7.3	.....	16,537	8	.....	.....	2,382	.....	44	18,971
457	Trafalgar, Halton	3,378	66,908	2,462,944	15,602	4 62	6.3	280	15,153	90	3,650	2,233	1,400	.....	88	22,894
458	Tuckersmith, Huron	2,431	40 661	1,962,910	13,460	5 54	6.9	2,744	10,938	6	300	1,090	.....	.....	1,868	16,946
459	Tudor and Cashel, Hastings	859	60,279	66,358	2,542	2 96	38.3	784	2,651	59	.....	.....	.....	.....	240	3,734
460	Turnberry, Huron	2,105	35,648	1,224,480	6,7 8	3 20	5.5	1,371	7,425	38	.....	22	1,050	.....	175	10,081
461	Tyendinaga, Hastings	3,379	77,895	1,418,035	15,181	4 49	10.7	1,099	15,299	140	.....	31	529	...	602	17,700
462	Usborne Huron	2,316	42,675	1,813,050	12,412	5 37	6.9	2,338	11,106	42	.....	.....	1,045	.....	75	14,606
463	Uxbridge, Ontario	2,695	51,700	993,500	10,332	3 83	10.4	267	10,950	132	.....	204	1,200	.....	91	12,844
464	Van Horne, Rainy River	246	9,5 5	48,180	1,201	4 88	24 9	249	644	50	.....	.....	.....	.....	.....	943
465	Vaughan, York	4,215	67,001	2,915,670	23,096	5 48	7.9	10,243	21,442	571	2,000	1,603	.....	.....	536	36,395
466	Verulam, Victoria	1,800	55,912	520,990	8,894	4 94	17 1	4,657	7,717	.....	.....	45	.....	.....	19	12,438
467	Vespra, Simcoe	2,990	62,060	994,874	10,643	3 56	10 7	572	10,846	12	.....	44	1,640	.....	397	13,511
468	Wainfleet, Welland	2,704	51,000	915,675	11,948	4 42	13 0	279	10,817	15	.....	945	.....	1,075	148	13,279
469	Wallace, Perth	2,780	49,934	1,948,910	12,381	4 45	6 4	378	13,825	55	3,888	173	739	.....	350	19,408
470	Walpole, Haldimand	4,117	66,628	1,948,730	19,922	4 84	10.2	.....	19,678	106	.....	6	4,853	.....	7	24,650

TOWNSHIP MUNICIPALITIES, 1900-1901.—*Continued.*

No.	Disbursemnets, 1900.													Assets on December 31, 1900.					Liabilities on December 31, 1900.			
	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Construction of buildings, waterworks &c.	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Miscellaneous	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
437	273	36	154	.....	.....	.....	1,497	.....	.....	.....	150	13	79	2,202	466	1,230	.....	11	1,707	678	.....	.....	.....	678
438	534	226	1,325	250	180	.....	5,807	75	.....	250	1,400	67	420	10,534	2,076	370	.....	2,2 0	4,696	2,181	500	250	.....	2,931
439	749	349	2,629	.....	148	2,615	3,479	.....	.....	173	1,500	194	78	11,367	1,571	1,570	.....	800	3,941	2,001	3,500	.....	100	5,601
440	891	26	1,014	.....	72	2,189	4,858	.....	.....	181	356	122	507	13,514	.....	.....	.....	600	600	.....	549	347	.....	893
441	825	256	1,623	.....	168	1,242	8 511	.....	.....	110	.....	22	10	12,863	546	9,161	.....	175	9,882	1,678	2,440	.....	300	4,418
442	670	346	5,770	.....	51	3,102	6,468	3,043	724	269	3,100	409	226	24,378	2,61	21	724	.....	3,361	.....	9,031	.....	.....	9,031
443	244	61	200	.....	10	.....	506	.....	.....	.....	.....	.....	36	1,057	138	947	.....	.....	1,085	110	.....	.....	24	134
444	213	69	40	.....	.....	.....	528	.....	.....	.....	.....	.....	15	1,230	599	756	.....	175	1,330	.....	.....	.....	.....	.....
445	720	99	1,328	.....	78	658	1,811	174	232	1,000	408	540	239	7,567	37	265	52, 401	2,216	54 919	.....	8,000	.....	.....	8,000
446	544	189	814	53	5	850	3,390	.....	.....	.....	973	19	403	7,240	17	3,688	.....	.....	3,705	3,028	.....	600	325	3,953
447	814	546	1,45	..	1,211	7,7 9	6,944	.....	.....	.....	.....	.....	17	18 542	300	6,529	.....	2,000	8,829	4,806	.....	.....	109	4,915
448	1,322	376	2,395	..	181	2,121	6,856	18,877	.....	9,532	19, 203	5,797	555	67,509	3,764	25,739	.....	3,621	33,124	5,828	147, 742	.....	25, 956	179, 526
449	972	198	888	.....	274	1,112	3,641	2,911	.....	2,134	.....	1,421	1,559	15,110	597	9,192	.....	1,046	10,635	3,136	27,439	.....	1,630	32,205
450	755	823	1,203	.....	433	1,333	3,403	9,710	.....	8,021	8,091	2,829	850	36,961	.....	10 470	.....	10,248	20,718	839	37,772	10,668	.....	49,219
451	828	265	1,878	40	128	2,542	4,871	.....	.....	878	1,000	2,671	312	14,803	1,434	4,668	.....	8,155	14,197	1,340	47,877	500	.....	49,717
452	361	..	316	.....	.....	752	1,085	.....	.....	.....	.....	.....	.....	2,464	395	2,383	.....	.....	2,778	1,475	.....	.....	247	1,722
453	1,273	990	4,170	.....	99	4,539	8,471	.....	4,601	973	3,000	268	727	29,111	681	4,160	28, 068	4,165	37,074	.....	3,07	3,015	.....	6,072
454	512	142	1,641	.....	5	1,333	1,890	.....	7	235	1,115	68	92	7,440	31	2	3,607	1,355	4,895	..	255	.....	.....	255
455	466	76	725	.....	119	1,108	3,456	.....	.....	.....	700	43	75	6,742	614	115	2	125	856	.....	.....	.....	.....	.....
456	999	241	1,586	.....	5	5,687	7,091	.....	.....	.....	3,191	16	155	18,971	....	6,032	.....	.....	6,032	760	954	2,382	.....	4,096
457	984	275	4,198	.....	288	2,600	7,421	.....	3,650	.....	2,250	137	627	22,430	464	4,146	15,173	5,896	55,679	609	.....	4,850	49	5,508
458	1,014	256	4,123	.....	5	2,164	4,860	367	.....	783	.....	264	257	14,094	2,853	.....	17,514	1,333	21,700	.....	5,199	.....	5	5,204
459	367	44	581	.....	15	191	2,131	.....	.....	.....	.....	.....	2	3,331	403	2,774	.....	.....	3,177	2,023	.....	.....	25	2,048
460	710	140	1,051	33	11	1,250	3,399	550	.....	.....	1,050	17	51	8,265	1,816	625	.....	183	2,624	1,250	.....	.....	.....	1,250
461	1,089	146	878	.....	363	8,163	6,301	.....	.....	200	500	20	40	17,700	....	2,032	.....	1,061	3,093	36	200	..	1,330	1,566
462	578	24	2,869	.....	5	2,266	4 831	59	.....	.....	1,045	32	117	11,766	2,840	68	.....	425	3,333	2,266	.....	.....	.....	2,266
463	950	161	1,551	.....	298	998	4,39	.....	1,064	200	1,200	1,202	189	12,191	653	748	6,754	1,70	9,8 5	..	19,600	..	..	19,600
464	193	64	23	.....	.....	.....	275	.....	.....	.....	200	12	40	807	136	682	.....	250	1,068	150	.....	425	110	685
465	1 469	37	5,131	.....	70	12, 829	8,942	.....	2,000	.....	.....	.....	418	31,208	5,192	1,107	35 332	1,674	43,30.	8	.....	.....	2,782	2,863
466	574	270	1,69	.....	111	1,508	4,127	.....	353	.....	.....	133	117	8,888	3,550	277	1,299	2,051	7,177	1,902	2,750	.....	118	4,770
467	859	149	1,382	.....	66	2,6 8	4,56	479	.....	476	1,640	146	414	12,753	758	1,51	.....	2,2 7	4,580	1,753	1,593	.....	160	3,506
468	826	29	1,063	.....	16	3,040	4,918	782	.....	1,783	.....	310	152	13, 86	93	3,159	25,000	8,663	36,915	690	5,124	.....	.....	5,714
469	765	120	2,09	.....	55	3,960	6,2 4	123	4,699	..	739	908	97	19,129	279	4,780	4,699	746	10,504	3,400	20,000	.....	60	23,520
470	875	214	3,36	.....	918	5,149	8,454	.....	.....	300	4,815	225	314	24,650	.....	26	.....	600	6.6	.....	2 400	469	.....	2,869

(No. 6 Pt. III.)

No.	Township Municipalities and Counties in which located.	Population, 1901.	No. of acres assessed 1901.	Assessed value of real and personal property and income taxable, 1901.	Taxes imposed for all purposes, 1901.			Receipts, 1900.							
					Total.	Per head.	Mills on $.	Balance from 1899.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.
				$	$	$ c.		$	$	$	$	$	$	$	$	$
471	Walsingham N., Norfolk	2,095	40,000	556,535	8,612	4 11	15.6	333	8,979	49	.....	..	500	.....	24	9,885
472	Walsingham S., Norfolk	1,900	54,000	689,085	10,517	5 54	15.3	199	10,327	32	.....	.....	933	.....	551	12,042
473	Warwick, Lambton	3,080	69,714	2,011,950	15,946	5 18	7 9	28	16,503	49	.....	.....	2,900	411	135	20,026
474	Waterloo, Waterloo	7,063	82,350	3,617,570	29,557	4 18	8.2	.....	29,570	356	6,763	1,668	2,465	.....	94	40,916
475	Watt, Muskoka	946	35,115	135,220	2,246	2 37	16.6	464	2,143	41	66	.....	.....	.....	30	2,744
476	Wawanosh E., Huron	1,858	41,734	1,441,560	7,215	3 88	5.0	1,964	6,798	30	.....	13	400	.....	116	9,321
477	Wawanosh W., Huron	2,080	41,718	1,313,975	8,292	3 99	6.3	47	8,790	2	.....	.....	600	1,270	25	10,734
478	Wellesley, Waterloo	4,740	66,039	2,109,705	22,434	4 73	10.6	4	19,394	428	61	494	1,975	.....	8	22,364
479	Westmeath, Renfrew	3,420	69,952	294,027	10,059	2 94	34.2	9	9,154	116	.....	.....	.....	.....	5	9,284
480	Westminster, Middlesex	4,462	63,177	3,005,200	22,065	4 95	7.3	10,406	21,831	145	.....	126	.....	.....	435	32,943
481	Whitby E., Ontario	2,495	31,175	1,630,760	10,393	4 17	6 4	246	10,133	152	.....	160	2,500	.....	86	13,277
482	Whitby, Ontario	1,950	30,737	1,492,310	12,586	6 45	8.4	287	11,649	183	.....	7	3,689	.....	23	15,838
483	Whitchurch, York	3,464	60,106	1,611,035	11,872	3 43	7.4	163	11,962	4	175	521	1,000	.....	48	13,873
484	Widdifield, Nipissing	655	45,129	74,045	2,096	3 20	28.3	.....	1,138	41	.....	.....	7	.....	.....	1,186
485	Wilberforce and Algona N., Renfrew	2,398	68,272	133,525	3,952	1 69	29.6	1,277	3,168	94	.....	.....	.....	.....	46	4,580
486	Williams E., Middlesex	1,376	38,576	1,232,160	8,780	6 38	7.1	3,769	10,588	55	.....	16	1,002	.....	99	15,529
487	Williams W., Middlesex	1,458	35,177	891,180	8,596	5 90	9 6	985	8,939	.....	.....	.....	3,200	.....	95	13,219
488	Williamsburg, Dundas	3,690	59,692	1,464,962	14,527	3 93	9.9	311	16,832	44	.....	.....	2,366	.....	1,201	20,854
489	Willoughby, Welland	926	18,779	417,720	4,376	4 73	10 5	266	3,976	86	.....	.....	.....	.....	3	4,331
490	Wilmot, Waterloo	4,938	60,712	2,589,950	20,467	4 14	7.9	2,116	19,868	522	.....	.....	1,000	.....	57	23,563
491	Winchester, Dundas	3,326	56,355	1,358,115	20,716	6 23	15.3	23	22,745	1	.....	.....	3 250	.....	366	26,385
492	Windham, Norfolk	3,649	66,719	1,569,250	12,877	3 53	8.2	679	13,209	69	.....	2	500	.....	86	14,545
493	Wolfe Island, Frontenac	1,417	30,927	596,895	8,885	6 27	14.9	241	9,280	59	.....	.....	.....	.....	.....	9,580
494	Wolford, Grenville	1,639	46,619	926,584	6,703	4 09	7.2	521	6,256	31	.....	.....	700	.....	1	7,509
495	Wollaston, Hastings	738	49,377	66,289	2,285	3 10	34 5	42	2,105	2	.....	.....	.....	.....	339	2,488
496	Woodhouse, Norfolk	2,000	34,600	1,115,834	9,892	4 95	9 0	1,151	9,449	33	.....	.....	792	.....	20	11,445
497	Woolwich, Waterloo	4,197	53,440	2,564,079	19,181	4 57	7.5	2,351	19,411	283	39	465	.....	.....	596	23,145
498	Yarmouth, Elgin	4,733	69,944	2,679,449	30,147	6 37	11.3	1,584	27,266	141	.....	1	11,000	.....	107	40,099
499	Yonge and Escott Front, Leeds	2,372	55,443	712,610	12,530	5 28	17.6	.....	12,223	129	.....	263	4,330	.....	9	16,954
500	Yonge and Escott Rear, Leeds	1,135	27,815	398,530	6,214	5 47	15 6	882	6,459	101	.....	249	.....	.....	464	8,155
501	York, York	8,965	58,000	5,755,760	81,004	9 04	14.1	444	108,457	808	2,291	917	408	.....	1,309	114,634
502	Zone, Kent	1,191	25 211	585,220	6,324	5 31	10.8	620	5,733	14	.....	.....	1,843	993	684	9,887
503	Zorra E., Oxford	3,901	57,539	2,734,570	25,434	6 52	9.3	2,107	22,768	465	.....	66	4,022	3,562	788	33,778
504	Zorra W., Oxford	2,388	55,057	2,571,260	15,844	6 63	6.2	4,004	16,810	31	1,518	550	4,888	2,093	828	30,722

No.	Disbursements, 1900.													Assets on December 31, 1900					Liabilities on December 31, 1900.				
	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Construction of building, waterworks, &c	Charities.	County levy.	Payment on account of schools and education.	Drainage work.	Sinking Fund and other investments and deposits	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits	Miscellaneous.	Total assets	County levy and school rates due and unpaid.	Debentures outstanding	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
471	467	226	2,429	....	21	1,597	4,210	46	.....	200	500	32	101	9,829	56	5,837	.....	1,341	7,237	3,488	200	...	...	3,688
472	569	419	1,175	....	7	1,823	3,956	...	.....	2,173	489	1,018	167	11,706	336	1,006	.....	1,750	3,092	765	18,566	450	175	19,956
473	691	216	3,442	....	305	2,619	6,201	1,425	...	1,092	2,900	267	311	19,469	557	1,026	.....	653	2,236	357	4,979	826	.....	6,162
474	1,393	1,113	5,083	....	64	4,911	15,056	.....	5,900	2,949	2,863	858	726	40,916	.....	.....	.....	36,665	10,216	46,281	.....	18,389	465	.....	18,854
475	293	102	253	137	46	....	1,331	.....	.....	200	.....	57	111	2,530	214	945	405	3,700	5,264	597	800	...	138	1,535
476	518	129	1,254	....	59	1,457	3,541	.....	.....	.....	400	7	4	7,309	1,952	154	.....	.....	2,106	1,469	.....	.....	.....	1,469
477	650	224	1,430	....	10	807	5,622	109	.....	63	600	23	160	9,098	1,636	1,225	.....	833	3,694	1,723	1,447	...	118	3 288
478	1,012	403	3,644	....	...	3,541	11,697	.....	.....	110	1,200	222	524	22,353	11	364	13,245	.....	13,620	.....	4 184	1,926	.....	6,110
479	1,013	392	925	94	100	1,781	3,090	.....	.....	575	.....	146	450	8,560	721	.....	.....	3,206	3,930	.....	2,221	.....	.....	2,221
480	1,095	455	6,324	....	52	6,047	7,429	.....	.....	310	.....	109	414	22,237	10,708	1,755	.....	1,390	13,853	5,9 6	1,390	.....	.....	7,326
481	784	205	2,476	....	221	1,698	4,692	.....	.....	.....	2,500	50	282	12,908	369	36	3,200	1,446	5 051	.....	.....	.....	80	80
482	835	605	2,863	....	229	1,661	4,226	.....	.....	1,383	2,500	314	176	15,795	43	43	64	566	650	33	3,769	189	77	4,068
483	831	164	1,615	....	40	3,548	5,219	.....	104	320	1,000	48	428	13,317	556	1,095	14,147	975	16,773	...	640	.....	303	943
484	206	46	395	....	...	.....	446	.....	.....	.....	13	....	86	1,186	.....	3,247	.....	350	3,597	894	.....	7	174	1,075
485	348	40	562	....	13	891	1,994	.....	.....	.....	.....	.....	185	4,033	547	1,976	.....	182	2,705	1,341	.....	.....	262	1,603
486	522	170	2,000	....	75	3,127	2,787	104	.....	.....	1,002	22	449	10,258	5,271	277	.....	19	5,567	3 069	.....	.....	250	3,319
487	501	100	2,647	250	99	2,328	3,149	6	.....	.....	2,950	99	357	12,486	733	4,789	.....	425	5 947	2,324	.....	3,100	197	5,621
488	560	337	4,207	....	353	2,577	6,872	2,005	.....	518	2,799	228	398	20,854	...	69	.....	3,768	3,837	...	2,855	166	.....	3,021
489	257	88	441	....	5	1,464	1,803	56	.....	.....	300	11	33	4,288	43	769	.....	1,000	1,812	682	.....	.....	.....	682
490	1,293	253	3,094	..	26	3,637	10,320	.....	.....	598	1,000	285	526	20,832	2,731	.....	.....	5,728	8,459	...	4,348	.....	.....	4,348
491	965	321	4,027	....	217	2,167	7,982	2,410	.....	4,231	1,274	1,548	115	25,197	1,188	167	.....	1,875	3,230	1,881	18,590	3,091	365	23,930
492	825	251	1,174	775	116	3,852	6,005	365	.....	.....	592	9	172	14,136	409	2,969	.....	2,518	5,896	.....	.....	.....	.....	.....
493	378	110	360	....	104	3,275	4,947	.....	.....	.....	.....	.....	115	9,289	29	4,056	.....	2,331	6,678	3,466	.....	.....	106	3,572
494	440	77	436	....	...	1,422	3 420	.....	.....	.....	1,400	13	200	7,408	101	1,125	.....	500	1,726	...	.....	700	.....	700
495	262	195	451	....	5	121	1,276	.....	.....	.....	.....	.....	28	2,338	150	1,530	.....	1,060	2,680	1,048	.....	.....	31	1,079
496	615	139	1,184	....	131	2,720	3,497	.....	.....	.....	1,566	13	254	10,099	1,346	186	.....	.....	1,526	.....	.....	.....	.....	.....
497	1,037	362	3,202	....	5	3,276	8,945	.....	.....	2,045	...	913	316	20,131	3,014	7	8,971	981	12,973	.....	18,025	.....	.....	18,025
498	1,447	1,954	12,369	....	106	.....	7,789	.....	.....	214	11,000	367	435	35,621	4,478	3,041	.....	1,692	9,211	7,702	2,865	.....	2,373	12,940
499	604	4,248	1,938	36	43	1,521	5,417	.....	994	.....	1,432	522	62	16,811	143	1,046	6,074	2,200	9,463	.....	8,788	3,936	...	12,718
500	294	59	540	....	...	732	3,481	.....	663	285	.....	785	27	6,866	1,289	112	9,356	2 555	13,312	.....	15,301	...	146	15,447
501	7,290	2,744	20,277	....	236	9,918	23,842	.....	3,394	12,513	17,328	6,466	10,621	114,629	5	47,177	31,377	100,817	179,376	21,690	98,070	6,927	14,704	141,391
502	611	232	799	....	153	784	606	1,036	.....	1,012	2,566	408	114	8,321	1,566	3,685	.....	1,022	6,273	2,499	4,704	750	.....	7,953
503	902	170	9,413	....	10	4,259	6,701	5,741	.....	2,191	3,500	578	313	33,778	....	350	.....	5,179	5,829	.....	14,437	522	2,032	16,991
504	645	363	2,601	....	59	4,324	4,623	1,874	1,518	1,442	3,100	400	323	21,272	9,450	438	14,541	450	24,879	.....	7,511	7,438	....	14,949

No.	Village Municipalities and Counties in which located.	Population, 1901.	Assessed value of real and personal property and income taxable, 1901.	Taxes imposed for all purposes, 1901			Receipts, 1900.											Disbursements, 1900.				
				Total.	Per head.	Mills on $.	Balance from 1899.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water, gas and electric light rates.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Administration of Justice, including police service.
			$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
1	Acton, Halton	1,471	304,685	6 027	4 10	19.8	286	5,854	399	1,751	....	49	4,100	....	142	12,581	625	1,783	268	22
2	Ailsa Craig, Middlesex	708	178,300	2,665	3 76	20 7	....	2,523	229	....	....	....	....	....	....	2 757	182	184	118	19
3	Alexandria, Glengarry	1,729	347,805	7,141	4 13	22 5	....	6,666	816	2,840	....	....	18,133	....	40	28,495	187	3,345	227	186
4	Alvinston, Lambton	800	192 660	4,359	5 45	22.7	....	4 308	564	....	....	2	3,557	....	200	8,631	365	827	224	20
5	Arkona, Lambton	450	83,025	1,118	2 48	13.5	215	1,067	195	....	....	....	....	....	13	1,490	137	....	96	14
6	Arthur, Wellington	1,278	251 460	5,002	3 91	19.7	287	5,643	636	....	1,376	31	2,200	3,754	677	14,598	454	300	289	69
7	Ashburnham, Peterborough	1,747	413,440	7 218	4 13	16 3	....	7,440	560	622	....	39	....	3,000	88	11,749	437	1 046	198	312
8	Athens, Leeds	954	179 325	3,461	3 63	19.3	471	3,687	90	....	....	4	200	....	....	4,452	185	35	47	20
9	Ayr, Waterloo	846	274,342	4, 90	5 19	16.0	....	4,709	198	....	79	202	....	....	....	5,188	168	322	104	31
10	Bath, Lennox and Addington	348	121,579	1,726	4 95	14 2	....	1,631	125	....	....	60	75	....	5	1,896	166	11	56	6
11	Bayfield, Huron	563	88,784	1,992	2 29	14 6	368	1,307	133	....	....	....	....	....	....	1,808	97	43	84	24
12	Beamsville, Lincoln	797	186,505	3,881	4 87	20.8	151	3 865	237	450	....	55	2,310	....	17	7,181	267	408	284	2
13	Beaverton, Ontario	746	159,518	3,245	4 32	20 2	1,104	2,577	189	....	....	259	600	....	111	4 810	185	238	116	38
14	Beeton, Simcoe	726	149,005	3,027	4 17	19 0	136	3,183	277	2,096	....	....	1,500	....	17	6,909	766	1,701	671	50
15	Belle River, Essex	563	60,917	1,272	2 26	20 9	373	1,200	197	....	....	....	....	....	....	1,770	129	....	73	6
16	Blyth, Huron	862	210,656	4,804	5 57	22.8	132	4,054	360	....	689	166	12, 338	2,550	....	20,289	296	980	222	79
17	Bobcaygeon, Victoria	891	161,561	3,969	4 45	24.6	3,831	3,461	289	....	....	81	....	....	44	7,706	177	109	214	317
18	Bolton, Peel	635	158,375	2,606	4 10	16.4	92	2,387	260	....	....	....	1,406	....	147	4,286	179	42	136	29
19	Bradford, Simcoe	997	248,019	5,102	5 12	20 6	14	8,630	331	....	....	....	....	....	101	9,076	637	120	182	25
20	Bridgeburg, Welland	1,311	474,540	6,244	4 76	13.2	1,942	6,751	143	....	16	11	1,500	....	52	10,415	328	10	167	46
21	Brighton, Northumberland	1,362	462,915	5,800	4 29	12 5	....	5,859	351	....	....	....	2,276	....	30	8,516	228	487	370	59
22	Brussels, Huron	1,166	317,401	7,784	6 68	24 9	668	7,630	580	....	2,557	360	3,000	8,530	986	24,311	401	680	337	100
23	Burk's Falls, Parry Sound	764	153,755	3,866	5 05	25 1	1,026	4,573	133	....	168	37	1,800	....	353	7,768	281	268	110	30
24	Burlington, Halton	1,320	353 660	5,100	3 87	14 4	24	4,921	277	....	....	5	2,700	....	115	8,289	310	457	358	8
25	Caledonia, Haldimand	803	171,174	3,917	4 88	22.6	512	3,458	350	....	....	9	....	2,000	123	6,482	373	41	142	14
26	Campbellford, Northumberl'd	2,504	739,002	14,173	5 66	19.2	2,530	14 679	602	1,004	....	....	....	4,000	5,535	30	28,055	683	264	521	419
27	Cannington, Ontario	1, 72	279 625	4,194	3 58	15 0	....	3,870	273	....	....	....	1.451	....	23	5,617	177	353	433	31
28	Cardinal, Grenville	1,281	377,175	4,682	3 65	12.4	39	4,192	518	....	....	....	800	....	78	5,627	190	692	335	4
29	Casselman, Russell	479	170,280	1,656	3 42	10.6	14	1,717	65	....	....	....	828	....	....	2,624	166	....	70	9
30	Cayuga, Haldimand	1,158	178,980	3,666	3 17	20.5	189	3,308	258	....	....	32	739	....	20.	4,725	243	300	115	6

No.	Disbursements, 1900.—*Continued.*										Assets on December 31, 1900.						Liabilities on December 31, 1900.				
	Streets, bridges and parks.	Construction of buildings, waterworks, etc.	Charities.	County levy.	Payment on account of schools and education.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Waterworks, gas and electric light plant.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
1	409	1,372	24	240	1,517	611	430	4,100	1,003	229	12,568	13	453	3,858	9,000	17,400	30,724	1,440	20,455	1,799	90	23,784
2	299	.....	27	186	1,415	.....	.....	23	16	257	2,726	31	93	112	.....	1,465	1,701	.....	.....	.....	.....	.....
3	951	203	23	230	1,503	.....	772	18,772	1,992	104	28,495	.....	1,000	.....	38,000	4,315	43,315	140	34,332	3,583	250	38,305
4	390	298	170	217	1,461	.....	641	3,568	208	242	8,631	.....	95	.....	1,390	4,862	6,347	.....	1,173	1,057	.....	2,230
5	261	24	38	113	488	.....	.....	.....	.....	18	1,184	306	.....	.....	.....	1,070	1,376	.....	.....	.....	.....	.....
6	1,116	375	9	606	2,120	31	5,000	2,800	902	144	14,195	403	687	.....	.....	5,311	6,401	1,050	14,254	.....	142	15,446
7	1,373	599	149	890	2,211	444	100	2,131	874	109	10,903	846	458	1,269	9,599	7,175	19,347	.....	19,716	.....	1,051	20,767
8	849	55	2	215	1,775	.....	.....	200	3	603	4,069	383	353	.....	.....	818	1,554	.....	.....	.....	1,193	1,193
9	245	28	103	348	1,874	618	337	320	506	159	5,160	28	501	4,745	.....	6,820	12,094	.....	12,167	257	200	12,624
10	102	....	69	246	460	.....	.....	82	3	3	1,253	643	202	2,000	.....	1,716	4,561	.....	.....	....	20	20
11	496	....	18	181	725	.....	.....	.....	.....	18	1,686	122	.....	.....	.....	600	722	.....	.....	.....	.....	.....
12	562	.....	29	374	1,175	.....	407	2,310	856	140	6,814	367	174	.....	15,000	2,765	18,306	375	12,573	1,000	28	13,976
13	845	.....	10	234	781	119	475	600	271	132	4,641	796	247	2,935	.....	8,440	12,418	816	4,450	1,170	.....	6,436
14	340	....	25	300	786	.....	525	.....	1,007	244	6,415	494	13	.....	36,000	7,215	43,722	323	19,078	2,321	303	22,025
15	459	.....	118	69	774	.....	.....	.....	.....	92	1,720	50	194	.....	.....	861	1,105	211	.....	.....	13	224
16	9,798	1,464	8	156	1,315	386	197	3,612	1,080	111	19,704	585	177	3,942	735	15,487	20,926	871	12,452	11,994	.....	25,317
17	614	.....	47	261	1,900	298	.....	.....	150	10	4,097	3,609	207	1,854	.....	5,747	11,417	2,161	3,000	.....	.....	5,161
18	956	13	11	135	787	.....	290	1,400	52	234	4,264	22	15	.....	.....	1,375	1,412	542	.....	.....	500	1,042
19	644	....	25	462	2,350	.....	564	1,051	215	168	6,443	2,633	1,343	.....	.....	8,700	12,676	2,490	3,559	....	325	6,374
20	1,785	.....	4	826	2,648	2	376	1,500	124	1,015	8,831	1,584	942	2	.....	4,556	7,084	1,880	2,116	.....	5,021	9,017
21	1,417	.....	75	353	3,000	.....	.....	2,315	56	156	8,516	.....	.....	.....	140	8,900	9,040	.....	.....	133	.....	133
22	6,618	504	32	252	1,671	4,237	507	6,500	2,370	102	24,311	.....	586	10,010	.....	15,440	26,036	249	49,332	3,000	539	53,120
23	782	40	45	....	1,600	250	246	1,500	467	524	6,143	1,625	177	630	.....	1,831	4,263	2,000	8,102	.....	249	10,351
24	1,247	.....	310	361	1,609	.....	266	2,700	136	47	7,809	480	261	2,000	1,351	7,967	12,059	361	882	600	.....	1,843
25	528	101	9	318	2,300	.....	1,500	.....	340	142	5,808	674	755	.....	.....	6,300	7,729	.....	6,000	.....	.....	6,000
26	1,653	5,215	103	542	5,074	.....	2,866	4,000	2,033	391	23,764	4,291	1,284	.....	33,500	8,499	47,574	.....	42,727	.....	1,700	44,427
27	646	.....	14	326	1,450	.....	379	1,520	189	99	5,617	.....	1,133	.....	.....	7,725	8,858	.....	2,711	780	.....	3,491
28	479	.....	30	258	1,656	.....	170	800	196	345	5,155	472	130	.....	.....	3,100	4,002	258	2,845	.....	50	3,153
29	605	.....	.....	100	756	.....	.....	536	163	84	2,493	131	1,100	350	.....	500	2,081	563	2,000	1,492	.....	4,055
30	738	.....	5	225	1,350	.....	512	736	182	130	4,542	183	393	.....	.....	4,525	5,101	.....	2,300	200	.....	2,500

No.	Village Municipalities and Counties in which located.	Population 1901.	Assessed values of real and personal property and income taxable, 1901.	Taxes imposed for all purposes, 1901.			Receipts, 1900.										Disbursements, 1900.			
				Total.	Per head.	Mills on $.	Balance from 1899.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water, gas and electric light rates.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Administration of justice, including police service.
				$	$ c.		$	$	$	$	$	$	$	$	$	$	$	$	$	$
31	Chesley, Bruce	1,720	371,875	8,667	5 04	23.3	2,517	8,649	285	.....	...	19	13,023	.....	282	24,775	361	746	406	381
32	Chesterville, Dundas	884	157,260	2,473	2 80	15 7	1,365	2,809	260	.....	.....	.....	1,040	.....	5	5,479	114	.....	98	.....
33	Chippewa, Welland	459	122,365	1,752	3 82	14.3	621	1,601	396	.....	.....	8	.....	.....	14	2,640	136	32	113	.....
34	Clifford, Wellington	593	123,000	1,692	2 85	13.8	1,304	851	234	.....	752	23	.....	.....	292	3,456	247	.....	122	.....
35	Cobden, Renfrew	638	84,825	1,387	2 17	16.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
36	Colborne, Northumberland	1,023	295,830	5,053	4 94	17.1	2,437	5,113	70	.....	.....	.....	2,300	.....	50	9,970	250	853	425	57
37	Creemore, Simcoe	615	182,175	2,573	3 99	19 5	238	2,611	194	.....	.....	.....	300	.....	32	3,375	149	147	72	42
38	Delhi, Norfolk	790	170,200	3,095	3 92	18.2	683	2,966	158	.....	.....	3	400	.....	171	4,381	122	11	82	7
39	Drayton, Wellington	759	165,525	3,707	4 88	22.4	326	3,287	471	.....	40	.....	2,176	.....	305	6,605	188	243	181	15
40	Dundalk, Grey	786	147,520	3,208	4 08	21 7	.....	3,383	256	1,817	.....	.....	1,493	.....	38	6,987	141	1,638	151	30
41	Dutton, Elgin	863	229,620	4,298	4 98	18.7	.....	3,858	240	.....	.....	.....	1,125	.....	93	5,316	224	376	213	49
42	East Toronto, York	1,524	539,910	15,290	10 03	28.3	59	15,045	102	1,340	134	312	2,237	.....	326	19,585	1,058	1,711	817	115
43	Eganville, Renfrew	1,056	287,940	4,022	3 81	14.0	987	4,803	437	.....	.....	.....	.....	.....	86	6,313	162	77	86	12
44	Elmira, Waterloo	1,084	320,420	4,215	3 89	13.2	26	4,107	156	.....	.....	.....	.....	.....	.....	4,329	239	298	160	38
45	Elora, Wellington	1,187	310,545	7,417	6 25	23.9	1,550	6,611	538	.....	.....	.....	.....	311	479	9,489	662	639	384	49
46	Embro, Oxford	590	198,273	2,846	4 82	14.4	1,397	2,559	246	.....	.....	.....	.....	.....	89	4,291	180	.....	197	90
47	Erin, Wellington	490	111,660	1,409	2 88	12 6	484	1,370	166	.....	.....	.....	100	.....	..	2,120	109	187	62	12
48	Exeter, Huron	1,791	511,040	9,003	5 03	17.6	3,996	10,479	545	16	.....	44	3,000	.....	220	18,300	615	1,213	262	18
49	Fenelon Falls, Victoria	1,204	295,151	4,427	3 68	15.0	415	4,877	404	.....	3,180	.....	.....	.....	66	8,942	401	29	455	195
50	Fergus, Wellington	1,437	420,460	9,053	6 30	21.5	260	8,407	750	.....	432	58	775	.....	496	11,178	453	890	230	339
51	Fort Erie, Welland	820	250,955	4,096	5 00	16.3	.....	4,588	342	.....	.....	.....	1,000	.....	28	5,958	306	.....	262	59
52	Garden, Island, Frontenac	267	54,200	1,762	6 86	32.5	.....	1,761	.....	.....	.....	.....	.....	.....	.....	1,761	25	.....	12	.....
53	Georgetown, Halton	1,338	373,210	7,694	5 75	20.6	.....	7,155	338	2,168	.....	.....	3,808	.....	71	13,540	209	886	170	159
54	Glencoe, Middlesex	1,037	311,780	6,312	6 09	20.2	1,008	7,524	684	.....	.....	.....	4,000	1,850	102	15,768	277	913	263	5
55	Grand Valley, Dufferin	760	149,150	3,162	4 16	21.2	1,479	2,921	359	.....	.....	.....	500	.....	515	5,774	143	.....	272	.....
56	Grimsby, Lincoln	973	226,685	5,463	5 61	24.1	1,304	4,896	113	.....	.....	10	3,400	.....	277	10,000	179	582	156	10
57	Hagersville, Haldimand	908	210,300	3,862	4 25	18.4	726	3,568	71	.....	.....	.....	993	.....	2	5,360	207	.....	122	9
58	Hanover, Grey	1,397	171,915	5,054	3 62	29.4	.....	3,923	57	.....	.....	.....	800	.....	220	5,000	235	449	182	20
59	Hastings, Northumberland	803	172,470	3,162	3 94	18 3	523	3,316	226	.....	.....	.....	.....	.....	...	4,065	173	449	177	104
60	Havelock, Peterborough	975	147,655	3,225	3 31	21.8	1,213	2,947	375	.....	.....	30	1,000	3,500	162	9,227	212	.....	109	133

No.	Disbursements, 1900.—*Continued.*											Assets on December, 31, 1900.					Liabilities on December 31, 1900.				
	Streets, bridges and parks.	Construction of buildings, water works, etc.	Charities.	County levy.	Payment on account of schools and education.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Waterworks, gas and electric light plant	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
31	9,086	5,079	88	438	2,400	...	546	1,500	873	518	22,422	2 353	21	...	.....	20,861	23,235	.....	17,131	11,523	887	29,541
32	1,429	.....	.....	158	1,125	.....	125	1,940	57	140	5,186	293	70	.....	.....	959	1,322	.....	538	.....	426	964
33	232	11	56	191	980	.....	.....	.. ..	.....	36	1,787	853	200	500	....	3,325	4,878	80	.....	500	.....	1,300
34	456	.....	14	209	1,000	...	.....	.....	.....	43	2,091	1,365	757	... .	.. ..	1,000	3,122	.....	.....	.....	...	.....
35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
36	1,297	.....	44	244	8,981	.....	.....	2,800	79	100	9,630	340	4	.....	.....	4,340	4,684	.....	.....	.....	.....	.....
37	730	...	26	461	906	.....	.....	.....	.. ..	499	3,032	343	1.331	.....	... .	150	1,824	671	.....	309	70	1,050
38	920	.....	5	313	1,602	.....	.....	400	5	363	3,830	551	397	.....	.....	.....	948	558	.....	.....	1,925	2,483
39	939	93	11	345	1,722	137	459	1,800	133	339	6,605	.....	831	137	... .	5,434	6,402	285	1 010	376	119	1,790
40	871	477	64	207	762	.....	436	1,621	327	262	6,987	.....	373	.....	6,500	750	7,623	580	5,707	193	1.722	8,202
41	964	...	20	225	1,225	.....	330	1,125	333	131	5,215	101	818	.....	.....	5,800	6,719	.....	5,850	.....	...	5,850
42	1,365	4,505	.....	.....	1,991	2,304	1,084	.....	3,308	1,033	19,286	299	9,749	16, 388	26,537	23,605	76,578	2,440	62,211	9,174	1,187	75,012
43	934	...	50	.....	1,374	.....	672	.....	38	60	3,465	2,848	.....	...	.....	3,205	6,053	1,250	264	.....	...	1,514
44	546	17	5	348	1,128	.....	500	.....	380	420	4,079	250	.....	.....	.....	800	1,050	.....	7,100	.....	1,228	8,328
45	1,062	400	20	731	2,716	.....	1,117	.....	690	353	8,823	666	5,139	.....	.....	12,988	18,793	2,473	11,602	.....	650	14,725
46	700	.....	17	300	1,001	.....	149	.....	132	66	2,832	1,459	43	.....	.....	7,000	8,502	1,154	2,489	.....	.....	3,643
47	246	359	3	184	687	.....	.....	100	2	103	2,054	66	4	.....	.....	500	570	.....	.....	.....	.....	.....
48	1,194	1,803	127	379	2,945	516	769	3,000	943	483	14,267	4,033	68	1,387	3,000	11,490	19,978	3,147	17,546	.....	47	20,739
49	661	...	32	376	1,610	.....	3,000	318	198	426	7,701	1,241	2,487	90	.....	2,588	6,406	1,703	.....	.....	230	1,933
50	1,369	27	3	861	3,620	155	1,033	700	532	644	10,796	382	1,638	1,314	.....	17,999	21,333	52	6,711	384	827	7,974
51	1,961	.....	12	246	1,450	.....	425	572	492	145	5,930	28	1,234	.....	.....	9,827	11,089	.....	7,112	2,286	120	9,518
52	5	.....	.....	325	980	.....	.....	.....	.....	175	1,522	239	.....	.....	.....	.....	239	.....	.....	.....	.....	.....
53	1,191	.....	84	348	3,442	.....	800	3,172	2,651	428	13,540	....	1,277	... .	40,000	12,120	53,397	...	49,600	1,808	.....	51,408
54	3,001	.....	64	48	1,869	.....	979	7,100	658	246	15,423	345	509	.....	.....	7,650	8,504	818	12,337	.....	.....	13,155
55	388	....	5	183	2,911	.....	..	500	30	636	5,068	706	68	.....	.....	123	897	.....	.....	.....	2,761	2,761
56	449	...	15	434	2,120	.....	532	4,500	433	394	9,864	196	92	.....	.....	5,100	5,388	634	3,722	734	.....	5,690
57	999	.....	19	.....	1,434	.....	281	1,261	288	208	4,828	532	1,090	.....	.....	69	1,691	234	3,718	832	94	4,878
58	717	.....	.....	356	1,626	.....	.. ..	800	15	165	4,565	435	181	....	... .	.....	616	.....	... ..	.....	100	100
59	293	...	113	203	1,187	.....	388	.....	164	125	3,376	689	233	.....	.....	7,800	8,722	.....	... .	2,200	.....	2,200
60	1,168	3,718	50	132	1,223	.....	106	1,600	238	305	8,994	233	372	.....	.....	4,675	5,280	.....	3,394	503	2,267	6,164

No.	Village Municipalities and Counties in which located.	Population 1901.	Assessed value of real and personal property and income taxable, 1901.	Taxes imposed for all purposes, 1901.			Receipts, 1900.										Disbursements, 1900.			
				Total.	Per head.	Mills on $.	Balance from 1899.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water, gas and electric light rates.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Administration of justice, including police service.
			$	$	$ c.		$	$	$	$	$	$	$	$	$	$	$	$	$	$
61	Hensall, Huron	823	216,570	2,292	2 78	10 6	1	2,236	163	.....	.....	.....	500	.....	5	2,905	94	36	97	15
62	Hintonburg, Carleton	2,600	429,179	12,756	4 91	29 7	10,988	9,352	836	2,314	.....	451	2,010	28,500	513	54,964	796	2,723	472	440
63	Holland Landing, York	452	69,365	962	2 13	13 9	95	970	52	.....	.....	.....	450	.....	3	1,570	99	.....	52	.....
64	Iroquois, Dundas	1,130	321,400	5,863	5 19	18.2	2,143	4,849	421	.....	.....	.....	3,000	.....	.....	10,416	127	201	2,858	1
65	Kemptville, Grenville	1,500	364,690	7,427	4 95	20 4	2,296	6,273	495	.....	827	.....	.....	2,500	2,255	14,646	292	230	835	158
66	Lakefield, Peterborough	1,159	330,995	5,601	4 83	16.9	80	4,908	463	.....	1,000	194	2,800	1,000	128	10,573	382	671	466	153
67	Lanark, Lanark	901	182,735	4,126	4 58	22.6	245	3,915	297	.....	.....	.....	700	.....	48	5,205	346	290	173	145
68	Lancaster, Glengarry	531	77,620	1,643	3 09	21 2	225	2,438	239	.....	.....	.....	350	.....	.....	3,252	95	100	56	13
69	L'Orignal, Prescott	1,683	121,775	2,372	2 19	19.5	212	1,997	110	.....	.....	.....	.....	.....	10	2,329	258	.....	35	8
70	Lucan, Middlesex	820	179,510	3,558	4 34	19.8	1,232	3,318	282	.....	.....	114	.....	.....	1	4,947	216	220	81	19
71	Lucknow, Bruce	996	272,174	6,172	6 26	22.7	2,231	7,743	537	.....	1,561	193	.....	.....	110	12,375	306	1,738	271	53
72	Madoc, Hastings	1,190	317,649	6,353	5 34	20.0	.....	7,821	345	.....	.....	.....	.....	.....	90	8,256	342	393	95	97
73	Markdale, Grey	1,025	188,340	3,318	3 24	17.6	477	3,535	200	.....	.....	.....	8,675	.....	393	13,280	192	208	1,444	51
74	Markham, York	1,163	278,919	6,237	5 36	22.4	1,074	6,832	207	913	.....	5	.....	.....	25	9,056	146	2,606	147	24
75	Marmora, Hastings	706	85,315	2,554	3 62	29 9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
76	Maxville, Glengarry	700	67,065	1,392	1 99	20.8	311	1,495	10	.....	.....	.....	.....	.....	1	1,817	115	.....	55	6
77	Merrickville, Grenville	953	294,250	4,540	4 76	15.4	33	4,868	301	.....	.....	.....	3,800	.....	.....	9,002	270	437	90	11
78	Merritton, Lincoln	1,690	669,835	15,267	9 03	22 8	.....	16,803	471	2,824	412	.....	971	.....	196	21,677	1,090	3,026	815	59
79	Millbrook, Durham	900	185,955	2,865	3 18	14 3	986	3,086	434	.....	.....	.....	820	.....	140	5,466	310	522	332	21
80	Milverton, Perth	703	145,025	2,542	3 62	17.5	592	2,654	317	.....	.....	.....	300	.....	53	3,916	145	.....	137	27
81	Morrisburg, Dundas	1,526	522,735	12,093	7 92	23.1	635	10,447	533	1,872	.....	.....	500	.....	68	14,055	285	2,065	413	55
82	Newboro', Leeds	381	90,665	1,733	4 55	19.1	640	1,733	114	.....	.....	207	.....	.....	56	2,750	69	.....	29	14
83	Newburg, Lennox & Add'tn.	595	112,445	3,388	5 69	30.1	511	3,051	25	.....	.....	.....	.....	.....	.....	3,587	166	83	80	10
84	Newbury, Middlesex	450	61,410	1,194	2 65	19.4	344	1,275	161	.....	.....	.....	.....	.....	156	1,936	146	.....	47	14
85	Newcastle, Durham	605	191,460	3,828	6 33	20.0	1,935	3,992	140	.....	.....	.....	500	.....	29	6,596	265	176	112	73
86	New Hamburg, Waterloo	1,201	358,724	6,140	5 11	17.2	.....	5,011	436	.....	.....	.....	1,878	.....	.....	7,325	269	649	113	68
87	Niagara Falls S, Welland	1,413	335,730	7,964	5 64	23 7	.....	7,755	166	525	.....	3	2,000	.....	4	10,453	486	1,413	219	76
88	Norwich, Oxford	1,397	318,280	8,132	5 82	25.5	1,273	7,314	453	.....	.....	15	6,065	3,500	152	18,772	301	1,774	293	369
89	Norwood, Peterborough	920	228,495	4,999	5 43	21.9	371	4,987	339	.....	.....	181	675	.....	196	6,749	184	545	88	81
90	Oil Springs, Lambton	974	244,045	5,114	5 25	21.0	503	5,394	260	.....	.....	48	4,000	3,468	318	13,991	418	9	235	52

VILLAGE MUNICIPALITIES, 1900-1901.—*Continued.*

No.	Disbursements, 1900.—*Continued.*											Assets on December, 31, 1900.						Liabilities on December, 31, 1900.				
	Streets, bridges and parks.	Construction of buildings, water works, &c.	Charities.	County levy.	Payment on account of schools and education	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears	Sinking Fund and other investments and deposits.	Waterworks, gas and electric light plant.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
61	700			169	1,050			500	12	109	2,782	123	19			365	507				144	144
62	1,366	21,736	251	379	3,077	210	1,478	500	3,266	1,211	37,905	17,659	9,422	1,415	82,077	7,205	117,178	3,527	104,870	1,547	2,017	112,007
63	198		22	135	480		100	400	23	27	1,536	34	384			571	989	134		285	26	445
64	1,535	366	107	202	3,034		929		530	215	10,093	323	2,120		3,673	7,850	13,966	2,381	10,664	3,000		16,045
65	4,120		195	402	2,800		1,263		636	469	11,340	3,306	1,652	1,491		16,108	22,557	402	17,791			18,193
66	638		56	462	1,494	1,435		2,900	605	977	10,239	334	39	4,403	229	10,300	15,305	504	11,000	100	303	11,907
67	145		107	345	2,000		264	700	193	193	4,901	304				7,206	7,504		3,157			3,157
68	561		16	109	1,847			200	3	56	3,656	196	188			715	1,099			255	47	402
69	523		2	237	1,029					10	2,100	227	780				967	483			112	595
70	850	68		133	1,517	659			450	54	4,267	686	164	4,046		3,672	8,657	126	9,000			9,126
71	1,717		5	369	1,709	2,097			1,120	288	9,613	2,762	904	14,304	10,000	5,860	33,776	376	19,600	4,076		23,952
72	534		55	686	2,302		884	452	788	231	6,859	1,397	2,392			6,350	10,139	644	17,673		186	18,503
73	2,626		7	258	936	564	354	5,425	674	365	13,104	176	269	764		10,770	11,779	520	3,968	8,675	1,500	14,664
74	649		21	412	1,167		1,243		938	24	7,377	1,679	827		14,100	3,810	20,416	1,994	17,173		270	19,437
75																						
76	517		13		823					39	1,568	249	169			19	437	92				92
77	429		10	355	2,119		600	3,800	282	205	8,608	394	40			5,000	5,434	366	3,500			3,866
78	3,480	567	116	1,039	3,660	278	2,664	1,212	3,432	239	21,677		963	278	73,207	12,704	87,092		58,348	471		58,819
79	494		8	204	910		257	820	210	318	4,406	1,060	271			8,083	9,414	765	3,438		285	4,488
80	816			182	1,085		227	300	223	117	3,259	657	13				670		5,146			5,146
81	1,654	1,343	215	618	2,891		1,663	500	1,427	156	13,285	770	174		30,000	4,099	35,043	1,761	26,341		176	28,278
82	209			115	831	347	136		273	12	2,035	715	239	2,879		1,253	5,066		5,189			5,189
83	195		80	383	1,497		500	250	88	5	3,277	310	3,498			100	3,908	2,040	1,500	275	392	4,207
84	196				448		400	200	70	88	1,609	327	713			2,264	3,304	683	600		7	1,290
85	309	23	123		3,000		175	500	92	82	4,924	1,672	27			2,500	4,199	717	1,499			2,216
86	756		67	410	2,100		882	1,365	505	141	7,325		3,125	3,000		9,133	15,258		6,994	1,878	243	9,115
87	1,470	185	138	392	1,528		983	1,000	980	526	9,396	1,057	2,414		11,000	2,551	17,022		16,858	2,979	2,173	22,010
88	4,814		110	481	1,628	765	624	5,707	735	104	17,708	1,067	852	3,784		8,432	14,135		18,502	5,858	48	24,409
89	910		11	930	1,954	433	133	675	567	30	6,541	208	336	4,968		5,280	10,792		9,839		274	10,113
90	369		8	231	1,368		2,537	6,500	1,046	461	13,234	757	3,944			4,300	9,001	231	13,640			13,871

No.	Village Municipalities and Counties in which located.	Population 1901.	Assessed values of real and personal property and income taxable, 1901.	Taxes imposed for all purposes, 1901.			Receipts, 1900.										Disbursements, 1900.			
				Total.	Per head.	Mills on $.	Balance from 1899.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water, gas, and electric light rates.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Administration of justice, including police service.
				$	$ c.		$	$	$	$	$	$	$	$	$	$	$	$	$	$
91	Omemee, Victoria	610	107,033	2,020	3 31	18 9	.....	1,962	212	.....	.....	.....	700	350	5	3,229	130	43	139	221
92	Ottawa East, Carleton	1,300	295,265	4,598	3 54	15.6	1,576	3,078	61	.....	.....	55	.....	.....	35	4,785	192	..	139	15
93	Paisley, Bruce	1,103	304,050	5,606	5 08	18.4	1,990	4 823	949	.....	.....	.....	1,500	.....	13	9,275	297	917	568	215
94	Point Edward, Lambton	814	185,860	3,566	4 26	19.2	573	3,334	76	.....	.....	.....	.....	.....	41	4,024	283	.....	87	6
95	Port Carling, Muskoka	316	57,526	583	1 84	10.1	149	1,564	40	.....	.....	.....	300	.....	52	2,105	130	.....	161	15
96	Port Colborne, Welland	1,257	361,855	5,135	4 09	14.2	573	5,353	328	926	.....	.....	400	.....	...	7,580	713	450	349	29
97	Port Dalhousie, Lincoln	1,057	279,904	5,362	5 07	19.2	889	5,682	226	.....	.....	.....	2,200	6,500	100	15,597	312	321	609	...
98	Port Dover, Norfolk	1,145	265,530	5,112	4 46	19.3	533	5,431	202	.....	.....	.....	500	.....	...	6,666	245	354	179	28
99	Port Elgin, Bruce	1,274	297,154	6,236	4 89	21 0	105	6,429	951	.....	4,622	58	.....	.....	123	12,288	201	363	201	404
100	Port Perry, Ontario	1,410	376,900	9,253	6 56	24 6	544	8,885	398	.....	.....	.....	1,800	.....	.....	11,427	619	874	340	127
101	Port Rowan, Norfolk	725	128,330	3,039	4 19	23 7	....	3,170	70	.....	.....	.....	2,110	.....	...	5,350	106	350	98	.....
102	Port Stanley, Elgin	542	145,390	2,228	4 11	15.3	105	2,343	362	.....	.....	.....	1,400	.....	...	4,210	276	130	214	169
103	Portsmouth, Frontenac	588	121,550	2,487	4 23	20.5	298	1,526	62	.....	.....	.....	363	.....	42	2,291	230	.....	161	105
104	Richmond, Carleton	462	71,075	1,891	4 09	26.6	605	1,217	45	.....	.....	60	.....	.....	362	2,289	153	.....	54	10
105	Richmond Hill, York	594	156,975	2,236	3 76	14.2	370	2,177	407	.....	.....	.....	300	.....	225	3,479	159	199	411	27
106	Rockland, Russell	1,638	74,750	4,653	2 84	62.2	291	4,797	150	.....	.....	.....	.....	.....	...	5,238	150	.....	193	95
107	Shelburne, Dufferin	1,163	350,320	7,219	6 21	20.6	588	6,680	610	.....	.....	.....	7,849	5,000	398	21,125	564	762	375	29
108	Southampton, Bruce	1,620	256,953	4,413	2 72	17.2	615	6,899	436	.....	.....	.....	900	3,200	203	12,253	355	337	254	74
109	Springfield, Elgin	488	88,830	1,631	3 34	18.3	72	1,632	96	.....	.....	.....	700	.....	41	2,541	105	41	126	7
110	Stirling, Hastings	801	178,616	3,619	1 52	20.3	385	5,244	104	.....	.....	9	300	.....	136	6,778	162	87	61	.....
111	Stouffville, York	1,202	335,300	5,423	4 51	16.2	976	5,718	132	280	.....	.....	.....	.....	62	7,168	150	257	136	5
112	Streetsville, Peel	533	156,550	2,227	4 18	14.2	47	1,790	117	.....	.....	.....	100	.....	6	2,060	268	142	96	32
113	Sturgeon Point, Victoria	369	19,850	402	1 09	20.3	44	376	1	.....	.....	.....	.....	.....	...	421	62	.....	26	25
114	Sundridge, Parry Sound	470	70,153	1,910	4 06	27 2	312	1,407	39	.....	.....	.....	916	.....	139	2,813	181	.....	523	.....
115	Sutton, York	593	138,675	1,431	2 41	10.3	251	1,446	175	.....	.....	.....	.....	.....	7	1,879	103	7	87	6
116	Tara, Bruce	664	215,746	3,052	4 60	14.1	348	3,054	222	.....	.....	3	.....	.....	213	3,840	156	.....	137	11
117	Teeswater, Bruce	878	246,250	4,512	5 14	18.3	1 523	4,411	427	.....	1,152	185	2,592	.....	71	10,361	271	618	212	5
118	Thamesville, Kent	889	219,700	6,249	7 03	28.4	2,276	5,591	191	.....	.....	.....	3,000	.....	5	11,063	240	640	239	371
119	Thedford, Lambton	602	98,275	2,006	3 33	20.4	188	1,709	89	.....	.....	.....	500	.....	25	2,511	102	42	106	15
120	Tilbury, Kent	1,050	208,710	7,329	6 98	35.1	21	9,399	209	1,000	374	21	8,319	7,770	370	27,483	342	1,977	353	6

No.	Disbursements, 1900.—*Continued.*										Assets on December 31, 1900.					Liabilities on December 31, 1900.				
	Streets, bridges and parks.	Construction of buildings, water works, &c.	Charities.	County levy.	Payment on account of schools and education.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Waterworks, gas and electric light plant.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
91	485	...	....	199	937	....	....	777	25	86	3,042	187	.....	.....	.....	900	1,087	.....	350	.....	.....	350
92	1,091	..	100	266	1,200	....	195	.....	163	36	3,397	1,388	2,206	500	.....	3,659	7,753	1,462	4,186	.....	169	5,817
93	1,632	....	7	541	2,112	....	545	1,500	113	268	8,715	560	673	....	.....	20,600	21,833	.....	1,174	.....	.....	1,174
94	111	...	7	328	2,279	.....	.....	.....	.....	18	3,119	905	1,325	.....	.....	1,705	3,935	1,300	.....	.....	.....	1,300
95	375	...	10	...	290	...	...	525	9	259	1,774	331	512	.....	.....	368	1,211	271	.....	.....	428	699
96	955	310	52	429	2,000	....	458	400	743	123	7,011	569	36	.....	21,360	1,743	23,708	.....	17,960	.....	.....	17,960
97	685	....	404	390	1,825	6,500	375	2,200	550	36	14,207	1,390	860	6,500	.....	1,309	10,059	1,692	12,102	.....	190	13,984
98	830	..	13	513	2,433	.....	702	500	318	58	6 173	493	871	.....	.....	4,600	5,864	457	6,149	..	.....	6.606
99	1,400	412	9	511	2,951	4,152	799	.....	515	267	12,185	103	2,124	1,800	.....	11,296	15,323	172	17,116	.....	48	17,336
100	779	141	60	474	3,851	.....	1,473	524	1,625	153	11,040	387	2,816	.....	.....	13,682	16,885	....	33,438	4,651	56	38,145
101	686	....	3	250	725	.....	140	2,219	87	537	5,201	149	368	....	.....	59	576	264	302	...	123	689
102	904	...	11	170	772	.....	....	1,200	39	73	3,958	252	809	.....	.....	1,600	2,661	189	.....	307	487	983
103	239	....	...	575	967	....	.....	.....	...	14	2,291	.....	.....	.....	.....	3,109	3,109	1,110	.....	363	....	1,473
104	143	80	23	.....	638	276	51	500	193	10	2,131	158	1,066	1,062	.. ....	2,432	4,718	1,429	3,313	.....	.....	4,742
105	403	....	53	250	985	.....	54	300	135	225	3,201	278	66	63	.....	4.391	4,801	..	2,846	.....	....	2,846
106	475	....	3	200	2,122	.....	..	450	...	197	4,185	1,053	1,335	.....	.....	1,000	3,388	907	..	382	554	1,843
107	3,670	5,797	28	...	3,775	.....	551	4,125	644	386	20,706	419	828	....	17,200	15,498	33,945	663	24,599	3,752	719	29,733
108	4,204	15	26	326	2,031	.....	520	900	834	221	10,197	2,056	2,159	10,000	.....	8,000	22,215	...	21,342	.....	.....	21,342
109	1,068	.....	...	172	454	.....	.....	200	5	100	2.278	263	198	.....	.....	1,881	2,342	.....	.....	515	484	999
110	444	.....	207	484	3,746	209	.....	1,060	53	182	6,694	84	1,185	421	.....	3,203	4,893	850	3,720	.....	.. ..	4,570
111	446	33	7	...	3,242	...	816	.....	1,054	384	6,524	644	215	.....	25,000	3.173	29,032	523	24,300	.....	165	24,988
112	244	....	15	142	588	....	.....	100	2	130	1,759	301	1,240	.....	.....	1,695	3,236	801	.....	.....	4	805
113	53	.....	....	25	30	.....	.....	130	13	29	393	28	13	.....	.....	37	78	70	.....	30	.....	100
114	110	....	97	...	558	166	...	400	355	280	2,670	143	1,708	5,664	.....	309	7,824	490	5,000	2,514	53	8,057
115	401	....	58	269	625	.....	.....	.....	...	25	1,521	358	33	.....	.....	4,104	4,495	.....	.....	.....	.....	...
116	461	83	5	294	1,386	185	134	.....	456	217	3,525	315	..	6,708	.....	3,866	10,889	.....	9,466	.....	.....	9,466
117	2,567	301	5	355	1,612	1,860	...	300	514	189	8,809	1,552	127	3,737	8,873	7,373	21,662	.....	10,500	2,292	505	13 297
118	3,137	.....	26	254	1,500	...	722	3,000	282	244	10,655	408	110	.....	1,000	8,800	10,318	1,855	4,084	.....	562	6,501
119	316	....	41	128	794	.....	.....	800	44	66	2,448	63	28	.....	.....	82	173	.....	.....	328	.....	328
120	2,357	... .	5	229	968	4,575	892	15,078	644	53	27,479	4	2,736	4,638	16,969	9,722	34,068	1,254	27,742	218	951	30,165

No.	Village Municipalities and Counties in which located.	Population, 1901.	Assessed values of real and personal pr perty and income taxable, 1901.	Taxes imposed for all purposes, 1901.			Receipts, 1900.										Disbur-ements, 1900.			
				Total.	Per head.	Mills on $.	Balance from 1899.	Municipal and school taxes.	Licenses, fees, rents, fines, etc	Water, gas and electric light rates.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Administration of justice, including police service.
			$	$	$ c.		$	$	$	$	$	$	$	$	$	$	$	$	$	$
121	Tiverton, Bruce	446	73,995	1,518	3 40	20.5	51	1,898	143	.....	1,500	.....	.....	.....	86	3,678	94	.....	93	12
122	Tottenham, Simcoe	562	141,475	2,824	5 02	20.0	220	2,705	222	.....	.....	.....	753	.....	3	3,903	121	129	482	1
123	Tweed, Hastings	1,217	241,000	4,121	3 39	17.1	798	4,187	350	.....	.....	.....	.....	.....	96	5,431	175	459	127	16
124	Vienna, Elgin	333	76,710	1,634	4 91	21 3	560	2,059	60	.....	.....	.....	.....	.....	.....	2,679	128	.....	58	7
125	Wardsville, Middlesex	330	60,628	1,245	3 77	20.5	196	1,143	140	.....	.....	.....	360	.....	59	1,898	117	.....	93	3
126	Waterdown, Wentworth	567	131,650	1,785	3 15	13.6	515	1,441	74	.....	.....	.....	.....	.....	81	2,111	171	.....	68	15
127	Waterford, Norfolk	1,043	260,500	6,564	6 29	25.2	7	6,681	197	.....	.....	.....	1,000	.....	9	7,894	354	146	199	27
128	Watford, Lambton	1,378	254,362	6,833	4 96	26 9	212	6,514	628	.....	750	.....	10,751	2,688	258	21,801	601	498	171	14
129	Wellington, Prince Edward	580	210,457	2,335	4 03	11.1	284	2,417	187	.....	.....	.....	1,250	.....	.....	4,138	173	18	127	9
130	Weston, York	1,075	305,379	6,787	6 31	22.2	7,815	6,479	397	901	.....	.....	430	.....	165	16,187	534	1,561	179	9
131	Winchester, Dundas	1,130	239,335	6,362	5 63	26.6	888	5,610	329	.....	.....	.....	2,725	.....	438	9,990	122	444	183	29
132	Woodbridge, York	626	108,850	1,879	3 01	17.3	354	1,499	162	.....	.....	170	300	.....	170	2,655	170	60	77	6
133	Woodville, Victoria	513	83,600	1,239	2 42	14.8	45	1,720	128	.....	.....	.....	260	.....	.....	2,093	142	4	40	4
134	Wroxeter, Huron	428	113,155	1,154	2 70	10.2	164	1,073	128	.....	5,058	136	300	.....	16	6,875	199	220	32	.....
135	Wyoming, Lambton	749	128,385	2,933	3 92	22.1	.....	2,904	321	.....	.....	.....	1,100	.....	133	4,458	263	160	123	1
	Town Municipalities and Counties in which located.																			
1	Alliston, Simcoe	1,374	325,596	8,450	6 15	26.0	914	7,560	484	271	2,300	436	.....	.....	87	12,052	569	660	181	144
2	Almonte, Lanark	3,038	807,660	18,434	6 07	22.8	438	17,907	1,022	.....	.....	.....	8,869	2,200	116	30,552	193	1,741	1,204	595
3	Amherstburg, Essex	2,119	458,020	14,628	6 90	31.9	266	14,066	581	3,245	.....	.....	105,074	...	528	123,790	1,730	1,944	740	333
4	Arnprior, Renfrew	3,837	754,117	20,087	5 24	26.6	3,529	17,091	1,854	..	...	139	21,804	.....	38	44,475	889	1,689	643	539
5	Aurora, York	1,576	437,959	8,483	4 38	19.4	420	8,461	241	688	.....	.....	4,350	.....	50	14,210	364	1,711	272	11
6	Aylmer, Elgin	2,186	705,646	19,716	9 02	27.9	188	17,620	724	34	.....	21	20,751	.....	12	39,360	708	3,789	825	269
7	Barrie, Simcoe	6,067	1,596,445	40,028	6 60	25.1	.....	39,906	3,252	16,572	14,738	420	10,748	..	373	86,609	1,330	17,253	2,424	1,243
8	Berlin, Waterloo	9,914	3,342,900	67,460	6 80	20.2	.....	60,632	3,394	6,293	5,000	398	22,606	18,280	9,053	125,656	3,580	12,897	3,3	700
9	Blenheim, Kent	1,639	422,600	9,212	5 62	21.8	287	12,505	1,101	.....	.....	103	10,450	2,654	883	27,983	865	1,515	821	16
10	Bothwell, Kent	900	220,000	5,478	6 09	24 9	1,198	3,600	925	985	.....	.....	4,677	2,000	1,014	14,299	1,028	1,367	257	50
11	Bowmanville, Durham	2,728	1,078,510	21,722	7 96	20.1	51	21,778	1,539	205	...	.....	10,800	....	550	64,923	992	2,737	759	1,300
12	Bracebridge, Muskoka	2,310	505,788	10,142	4 39	20.1	492	8,309	741	5,664	9,116	334	11,500	.....	359	36,515	1,915	2,049	1,327	485

No.	Disbursements, 1900.—*Continued.*										Assets on December 31, 1900.						Liabilities on December 31, 1900.				
	Streets, bridges and parks.	Construction of buildings, waterworks, etc.	Charities.	County levy.	Payment on account of schools and education.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits	Waterworks, gas and electric light plant.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
121	391	..	4	161	660	....	1,500	.....	1 6	58	3,089	589	320	...	... .	2,000	2,909	....	1,500	.....	.....	1,500
122	78	350	5	195	1,100	....	91	1,059	210	102	3,903	.. ..	426	.....	.....	3,718	4,144	....	3 226	43	35	3,304
123	331	.....	30	434	1,367	...	465	.....	631	105	4,080	1,351	2,662	5,000	.....	4,956	13,363	1,883	12,994	.....	138	15,015
124	409	..	.....	143	731	91	....	125	152	....	1,844	835	514	455	.....	1,500	3,304	48	3,000	.....	24	3,506
125	150	26	.....	289	730	...	..	160	27	4	1,196	299	278	.....	.....	1,223	1,800	587	.....	210	74	671
126	656	..	40	17	663	.....	.....	.....	...	104	1,889	222	9 7	...	.....	1,000	2,173	.....	.....	.....	.....	.....
127	1,423	100	67	674	1 942	....	1,127	1,000	462	57	7,758	356	282	.....	.....	1,000	1,568	.....	9,587	.....	304	9,891
128	3,1 2	.....	73	294	2,600	756	949	10,751	608	580	21,491	710	..	100	.....	6,799	7,709	...	13,659	.....	....	13,659
129	227	.....	130	399	675	...	200	1,850	1 3	11	,,582	156	165	.....	275	750	1,346	....	1,000	950	....	2,550
130	727	7,640	159	5 4	2,404	.....	1,091	.....	1,077	22	16 101	86	98	...	7,000	6,728	14,802	1,278	16,860	430	2,520	21,088
131	1,293	.....	32	.....	1,511	1,5 8	805	3,225	555	206	9,942	48	....	1,558	.....	4 030	5,616	215	8 69	200	481	9,589
132	431	....	20	197	760	....	134	300	3 1	29	2,405	150	6 2	3,554	30	3,086	7,432	....	6,284	854	9	7,147
133	414	.....	70	176	650	..	..	200	9	204	1,913	180	101	.....	... .	800	1,081	176	.....	....	121	297
134	184	119	....	90	....	1,27	4,000	375	251	7	6,84	60	60	....	119	5,109	5,888	574	.....	.....	....	574
135	330	47	147	176	1,144	...	169	1,206	65	166	4,297	161	299	.....	.....	1,575	2,035	....	365	.....	.....	365
1	539	400	52	477	1,653	1,336	706	.....	2,331	3 6	9,378	2,674	1,192	8,545	19,341	11,298	43,050	1,878	52,166	.....	13	54,057
2	3,727	.....	605	1,550	6,250	.....	3,000	8,848	2,352	467	30 52	20	525	....	...	59 900	60,483	555	43,500	21	807	44,883
3	9,772	....	451	525	3 350	...	2,019	96,826	4,995	1,165	22 79	...	7,139	....	43 500	45,737	96 776	3,135	62,788	31 848	86	98,636
4	1 803	17,477	396	1,47 7	7,396	564	1,308	2,700	2,071	720	39,596	4,859	5,237	34,168	17,000	28,965	90,169	4,015	48,090	19,104	300	71,509
5	759	.. ..	40	777	3,050	.....	1,298	4,350	1,360	60	11 045	165	1,907	260	16,800	10,000	29,072	1,000	21,923	1,590	78	24 591
6	4,570	2,461	196	903	4,407	.....	4,9 2	13,200	2,058	1,042	39 360	.. ..	1,015	....	17,000	18,680	76,6 5	30,984	7,551	....	....	38,535
7	5,976	17, 952	958	3,589	11, 257	35	7,695	6,2 7	9,257	1,123	86,009	....	6,043	1,742	149,950	50,725	208 460	5,470	213 247	10, 7 8	2,760	232,231
8	27, 742	9 763	1,743	3,600	18 111	.....	10,558	17,104	13,261	3,286	125,656	.....	2,715	.....	128,000	199,835	330,550	.....	295,832	2 ,606	....	318,438
9	744	32	15	604	2,584	.....	2,357	18,750	2,022	468	25,733	2,250	2,423	.....	.....	20,751	25,424	604	21,850	2,556	436	25,440
10	608	1,792	97	512	1,671	.....	431	4,172	298	1,844	14,127	172	2,422	.....	6,600	8,005	17,199	....	8,842	6 5	...	9,467
11	19,781	574	678	976	6,829	1 4	1,532	22,900	3,833	1,322	64,387	586	1,904	124	.....	41,697	44,311	....	72,081	23,700	.....	95,781
12	3,924	7,040	266	.....	2,200	710	8,680	326	3,390	409	32,767	3,748	1,191	1,727	50,000	15,380	72,046	2,800	44,555	11,6 6	651	59,642

No.	Town Municipalities and Counties in which located.	Population, 1901.	Assessed values of real and personal property and income taxable, 1901.	Taxes imposed for all purposes, 1901. Tot	Per head.	Mills on $	Receipts, 1900. Balance from 1899.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water, gas and electric light rates.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.	Disbursements, 1900. Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Administration of justice, including police service.
			$	$	$ c.		$	$	$	$	$	$	$	$	$	$	$	$	$	$
13	Brampton, Peel	2,813	968,834	21,731	7 73	22.4	2,486	18,807	714	3,531	....	90	3,807	5,615	287	34,867	1,156	1,748	879	343
14	Brockville, Leeds	8,864	3,451,775	84,401	9 53	24.5	274	81,251	7,826	24,485	6,993	5,392	220,198	160,000	1,712	448,131	3,649	27,931	4,504	8,095
15	Carleton Place, Lanark	4,072	899,570	20,708	5 09	23 0	8,914	21,433	1,781	....	....	58	14,500	2,800	245	49,731	1,147	2,693	1,600	475
16	Clinton, Huron	2,434	639,902	14,522	5 97	22.4	12,264	13,754	1,410	....	....	194	4,433	5,359	346	37,760	904	1,481	816	235
17	Cobourg, Northumberland	4,349	1,512,942	33,466	7 70	22.1	253	32,873	6,132	....	....	....	....	5,823	321	45,402	2,680	3,399	1,970	1,429
18	Collingwood, Simcoe	5,878	1,578,403	39,987	6 80	25.3	2,174	33,657	3,660	9 651	....	164	23,050	63,900	2,891	139,147	1,974	10,183	3,158	900
19	Copper Cliff, Nipissing	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
20	Cornwall, Stormont	6,243	1,752,245	44,370	7 11	25.3	....	37,629	3,890	4,328	....	1,385	126,304	10,391	187	184,114	1,690	6,883	2,297	2,631
21	Deseronto, Hastings	3,746	719,465	20,864	5 57	28.0	....	21,631	1,019	1,439	....	20	....	....	113	24,222	745	3,587	624	479
22	Dresden, Kent	1,508	393,934	11,119	7 37	28.2	....	12,263	889	....	....	....	2,500	....	169	15 821	447	1,084	273	466
23	Dundas, Wentworth	3,212	941,945	23,125	7 20	24.6	2,249	20,465	887	1,255	2,765	1,039	2,500	....	489	31,589	1 500	2,343	1,048	940
24	Dunnville, Haldimand	2,142	688,590	13,026	6 08	18.9	....	14,478	514	1,273	....	....	5,984	21,000	126	43,375	596	3,008	1,059	350
25	Durham, Grey	1,404	341,016	7,393	5 27	21.7	4,885	6,768	559	....	1.129	186	3,329	10,000	64	26,920	418	645	601	34
26	Essex, Essex	1,410	384,822	10,390	7 37	27.0	12	10,964	417	1,676	....	....	11,500	....	108	24,677	444	2,149	564	96
27	Forest, Lambton	1,574	331,182	8,884	5 64	26 8	1,233	8,908	610	....	350	....	11,767	6,761	359	29,988	330	931	438	247
28	Fort William, Thunder Bay	4,093	1,333,451	41,097	10 03	30.7	2,256	36,304	2,826	14,280	1,722	2,229	90,701	88,722	2,841	191,881	1,913	16,683	4,115	1,607
29	Galt, Waterloo	7,985	2,889,295	55,872	7 00	19 3	....	54,397	6,919	8,477	1,000	1,970	1,039	20,635	595	95,032	1,894	11,286	2,981	844
30	Gananoque, Leeds	3,718	1,105,293	22,504	6 05	20.4	1,792	22,277	2,064	....	....	498	16,500	....	59	43,190	761	2,231	655	1,406
31	Goderich, Huron	4,060	1,197,105	27,982	6 89	23.4	7,463	28,448	899	7,900	....	1,285	112,500	10,000	381	168,876	1,997	12,155	1,644	445
32	Gore Bay, Manitoulin	510	126,285	3,171	6 22	25.1	295	3,666	41	....	....	....	....	....	....	4,002	216	76	101	19
33	Gravenhurst, Muskoka	2,375	359,335	12,931	5 44	36 0	533	14,895	406	....	....	211	5,673	10,000	701	32,419	490	877	564	400
34	Harriston, Wellington	1,675	454,280	11,031	6 59	24.3	2,691	9,624	843	....	....	....	20,685	....	459	34,302	800	1,294	400	178
35	Hawkesbury, Prescott	3,802	251,771	8,891	2 31	35 3	918	8,216	973	....	....	....	2,880	....	741	13,728	276	32	211	429
36	Hespeler, Waterloo	2,398	628,465	10,641	4 44	16 9	272	9,800	233	....	....	43	13,000	10,000	313	33,661	445	1,202	966	250
37	Huntsville, Muskoka	2,021	368,870	9,960	4 93	27.0	169	8,800	490	6,667	....	....	6,000	....	17	22,143	833	3,198	749	45
38	Ingersoll, Oxford	4,559	1,455,485	35,659	7 82	24.5	....	36,363	2,561	....	3,141	2,430	16,790	14,726	2	76,013	1,663	5,993	1 367	1,147
39	Kincardine, Bruce	2,172	606,838	16,193	7 46	26 7	903	19,176	675	4,854	6,731	710	2,700	....	953	36,202	556	5,021	673	379
40	Kingsville, Essex	1,824	370,636	10,694	5 86	28 9	1,218	7,765	324	7,767	....	....	4,000	....	1,203	22,277	1,173	956	734	10
41	Leamington, Essex	2,390	654,105	19 583	8 19	30 0	....	7,390	629	14,742	....	279	27,530	18,350	1,317	70,237	801	2,468	693	165
42	Lindsay, Victoria	6,929	1,968,000	52,960	7 64	26.9	633	55,756	3,657	5,376	12,350	1,943	20,809	75,000	1,010	176,534	3,762	10,004	1,995	1,937
43	Listowel, Perth	2,597	790,595	18,912	7 28	23.9	1,524	17,767	956	....	....	162	6,677	10,000	601	37,687	630	2,494	927	365

No.	Disbursements, 1900.—*Continued.*										Assets on December 31, 1900.						Liabilities on December 31, 1900.				
	Roads and bridges, streets and parks.	Construction of buildings, waterworks, &c.	Charities.	County levy.	Payment on account of schools and education.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Waterworks, gas and electric light plant.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
13	3,017	188	336	986	5,620	466	8,031	3,000	7,718	671	34,169	708	2,539	466	120,000	14,779	138 492	4,600	145,709	3,104	....	153,413
14	28,146	110,869	1,625	....	18,808	18,471	2,981	194,635	24,796	3,405	447,915	216	32, 459	125,380	280,505	196,114	634,674	....	644,159	50,025	1,019	695,203
15	4,049	1,391	297	1,703	8,500	....	2,800	14,700	2,964	1,558	43,877	5,854	.....	3,500	.....	55,553	64,907	5,000	64,360	3,515	868	73,683
16	6,142	300	93	610	4,300	1,994	....	4,433	2,244	5,634	29,186	8,574	781	34,448	....	24,500	68,303	610	59,859	....	470	60,939
17	6,772	285	711	1,418	9,302	.....	3,930	....	9,712	974	42,582	2,820	11, 590	....	.....	154,009	168,419	1,354	208,456	13,500	2,565	225,876
18	1,753	3,749	828	2,825	10, 919	540	10, 567	23,050	14,598	52, 575	137,619	1,528	216	4,360	112,000	139,004	257,108	1,753	292,499	.....	10, 417	304,669
19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20	7,593	13,043	1,112	1,693	11,236	2,170	10, 694	107, 410	11, 668	3,994	184,114	...	39, 106	19,485	105,936	50,154	214,681	13, 111	260,187	31,572	.....	304,870
21	1,911	1,522	182	1,137	6,973	....	1,880	109	3,141	1,834	24,124	98	154	.....	42,722	8,939	51.913	.....	65,875	.....	.....	65,875
22	1,192	.....	418	557	1,854	.....	2,476	2,912	957	385	13,021	2,860	2,357	.....	.....	36,200	41,357	1,703	17,300	.....	.....	19,003
23	4,280	621	742	1,361	5,602	1,866	1,787	3,619	3,980	1,353	31,042	547	20, 923	20,683	45,744	79,416	167,313	.....	80,962	2,200	...	83,162
24	9,692	5,798	406	720	2,650	6,000	1,312	5,487	1,490	4,807	43,375	....	8,368	6,000	13,500	9,005	36,873	3,550	34,473	5,984	1,360	15,367
25	4,150	.....	111	356	2,105	10, 017	2,600	.....	1,498	138	22,673	4,247	275	10,000	.....	6,600	21,122	...	35,319	3,473	120	38,912
26	634	.....	55	466	3,860	....	2,063	10,700	2,700	825	24,556	121	3,798	.....	32,931	5,606	42,456	2,066	42,892	4,700	.....	49,658
27	7,715	.....	103	372	3,000	350	1,309	11,867	786	532	27,980	2,008	336	.....	.....	16,385	17,729	.....	19,310	500	.....	19,810
28	7,503	35,360	542	....	13, 380	13, 517	....	69,736	15, 131	8,953	188,440	3,441	30, 028	49,168	76,270	127,160	286,067	1,182	221,975	131,991	807	355,955
29	17, 324	5,314	1,617	3,536	18, 151	8,966	.....	2,584	11, 033	6,502	95,032	....	2,406	50,010	157,500	73,507	283,423	.....	278,354	1,039	3,300	282,693
30	4,053	....	391	1,261	6,750	2,458	..	17,500	3,212	1,144	41,822	1,368	1,200	19,148	30,000	30,665	82,321	.....	66,536	3,500	808	70,844
31	18, 153	7,841	283	.....	8,294	18, 312	1,276	85,500	11, 135	1,097	168, 132	744	4,996	86,875	114,581	73,888	281,084	985	178,237	76 000	.....	255,222
32	358	200	33	.....	637	.....	.....	856	127	95	2,718	1,284	336	1,363	.....	2,330	5,313	856	1,850	113	53	2,872
33	1,846	3,100	177	.....	4,442	93	2,831	11,573	1,821	1,018	29,232	3,187	1,768	93	.....	17,836	22,884	2,604	32,718	.....	4,545	39,867
34	11, 122	.....	23	1,002	3,924	.....	612	10,400	1,293	924	31,972	2,330	3,445	.....	.....	12,800	18,575	828	30,214	13,977	250	45,269
35	2,427	.....	....	645	4,085	.....	180	3,679	351	416	12,731	997	3,111	.....	.....	479	4,587	1,147	7,320	1,000	212	9,679
36	3,199	4,980	103	626	3,199	.....	447	11,700	545	174	27,836	5,825	670	.....	11,554	12,621	30,670	.....	17,468	3,000	7,198	27,666
37	3,479	2,811	22	.....	2,447	.....	1,016	5,000	1,930	250	21,780	363	1,364	.....	38,664	1,444	41,835	3,000	30,947	4,900	460	39,307
38	10, 949	.....	597	2,196	9,887	5,619	579	22,270	9,789	3,957	76,013	....	8 821	48,262	.....	89,333	146,416	.....	165,193	16,790	.....	181,983
39	823	.....	175	963	4,688	8,221	4,214	2,700	3,674	1,095	33,182	3,020	5,411	16,249	55,975	34,800	115,455	3,763	70,997	2,555	175	77,490
40	4,376	2,857	23	225	2,172	....	4,427	500	2,563	418	20,434	1,843	4,498	.....	50,000	12,376	68,717	*2,417	41,790	7,064	1,173	52,444
41	1,084	6,982	786	..	5,861	.....	4,465	40,718	5,438	585	70,046	191	8,568	.....	45,000	30,210	83,969	4,647	96,794	6,300	1,086	108,827
42	26,738	79,345	738	2,622	14, 308	14, 393	3,032	1,700	11, 316	2,746	175,636	898	12, 947	47,481	77,688	80,085	219,099	2,607	282,197	45,409	2,168	332,381
43	4,150	759	475	935	4,478	11, 839	873	1,677	4,638	642	34,882	2,805	2,299	17,397	9,000	13,927	45,428	.....	110,200	6,677	.....	116,877

No.	Town Municipalities and Counties in which located.	Population, 1901.	Assessed values of real and personal property and income taxable, 1901.	Taxes imposed for all purposes, 1901.			Receipts, 1900.										Disbursements, 1900.				
				Total.	Per head.	Mills on $	Balance from 1899.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water, gas and electric light rates.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures.	Miscellaneous.	Total receipts.	Allowances, salaries and commission.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Administration of justice, including police service.	
			$	$	$ c.		$	$	$	$	$	$	$	$	$	$	$	$	$	$	
44	Little Current, Manitoulin	535	108,000	2,369	4 32	21 9	11	2 254	136	.....	.....	.....	.....	.....	13	2,414	133	.....	138	188	
45	Mattawa, Nipissing	1,594	273,365	6,054	3 80	22 3	181	6,652	949	.....	1,497	126	1,064	.....	534	11,547	494	261	494	540	
46	Meaford, Grey	1,895	616,852	14,021	7 40	22 7	167	13,166	877	1,264	.....	21	44,048	56,000	4,877	120,460	1,102	2,859	955	73	
47	Midland, Simcoe	3,040	727,060	18,177	5 98	25 0	2,103	12 654	877	.....	.....	.....	.....	17,400	4,000	37,534	883	1,559	990	317	
48	Milton, Halton	1,321	419,985	8,380	6 34	20 0	4,255	6,881	445	882	540	263	3,200	10,000	381	26,857	618	1,244	503	178	
49	Mitchell, Perth	1,354	672,044	13,440	6 88	20 0	63	14,042	1,077	1,843	.....	.....	61,180	.....	470	78,676	642	4,316	579	421	
50	Mount Forest, Wellington	2,184	632,055	14,588	6 66	23 0	1,599	12 1 7	1,026	2,171	1,700	753	57,700	9,959	29	70,377	744	3,354	724	134	
51	Napanee, Lennox and Add.	2,848	984,479	26,040	9 14	26 5	4,000	26,461	2,103	75	.....	42	.....	10,000	449	43,730	1,423	3,724	859	65	
52	Newmarket, York	2,366	515,985	12,659	5 35	24 5	1,674	11,642	881	6,293	1,306	.....	970	.....	111	22,277	738	6,000	457	28	
53	Niagara, Lincoln	1,250	515,285	11,422	9 14	24 6	116	11,142	998	2,856	.....	5	4,799	.....	13	19,929	725	3,797	454	44	
54	Niagara Falls, Welland	4,498	2,016,450	51,712	11 50	25 6	28,065	46,682	1,082	20,760	.....	2,262	56,784	13,730	1,625	170,960	3,888	17 156	3,422	1,604	
55	North Toronto, York	1,830	839,763	18,315	10 01	21 8	26	16,807	475	1,428	.....	532	11,909	761	115	36,053	1,350	3,331	684	418	
56	North Bay, Nipissing	2,500	456,009	16,024	6 41	35 1	1,826	12,507	1,084	3,780	.....	211	4,000	.....	100	23,508	808	3,903	485	258	
57	Oakville, Halton	1,708	449,327	9,499	5 85	22 3	707	10 835	710	.....	1,277	257	4,828	.....	61	18,675	401	1,316	380	132	
58	Orangeville, Dufferin	4,100	774,345	20,179	4 92	26 6	551	19 340	1,210	1,710	4,055	499	20,413	.....	111	47,889	788	2,773	2,502	607	
59	Orillia, Simcoe	4,863	1,388,370	37,663	7 62	26 7	29,930	30,491	1,913	11,783	.....	1,137	.....	46,124	3,200	124,578	2,536	10,000	1,648	706	
60	Oshawa, Ontario	4,303	1,204,520	26,169	6 08	21 7	.....	25,957	1,023	.....	.....	429	2,504	55,000	898	85,811	816	2,613	1,320	746	
61	Owen Sound, Grey	9,255	2,846,818	70,937	7 67	24 9	15,434	62,754	3,312	9,962	6,092	3,246	33,703	24,141	1,771	160,355	2 825	8,699	3,632	3,261	
62	Palmerston, Wellington	1,777	440,000	11,162	6 28	25 4	26	11,406	461	.....	.....	1,038	3,172	.....	127	16,230	805	1,900	201	362	
63	Paris, Brant	3,214	1,000,415	22,718	7 07	22 7	.....	22,249	899	4,871	5,000	985	14,000	5,000	412	52,816	2,000	5,951	982	721	
64	Parkhill, Middlesex	1,346	347,585	8,329	6 19	24 0	1,374	7,379	498	.....	.....	167	2,300	.....	185	11,903	515	513	577	222	
65	Parry Sound, Parry Sound	2,628	442,280	13,740	5 23	31 7	452	12,504	964	1,954	.....	126	16,900	.....	188	33,888	665	2,170	677	538	
66	Pembroke, Renfrew	5,131	1,188,175	29,390	5 73	24 7	.....	29,452	2,497	5,917	.....	161	7,718	.....	140	45,885	1,488	4,087	3,912	850	
67	Penetanguishene, Simcoe	2,718	542,455	13 680	5 03	25 2	2,708	12 760	478	2,156	1,000	135	2,500	.....	250	25,777	828	4,081	398	425	
68	Perth, Lanark	3,637	1,234,265	23,238	6 39	18 8	6,903	23 3 5	1 281	.....	.....	30	.....	.....	2 9	31,788	840	3,703	964	703	
69	Peterborough, Peterboro'	10,995	4 584,835	88,763	7 62	18 5	.....	76,196	10 621	.....	9,600	2,826	53,351	.....	106	172 800	4,015	15,653	3,567	6,599	
70	Petrolea, Lambton	4,015	1,199,205	36,360	9 06	30 5	135	36,664	1,899	12 579	.....	.....	35,156	4,344	5 2	90,979	2,052	12 024	8,709	1,862	
71	Picton, Prince Edward	3,640	1,323,102	21,934	6 03	16 6	499	23 028	1,272	9,273	.....	141	1,478	15 000	641	51,342	1,503	11 606	985	911	
72	Port Arthur, Thunder Bay	3,148	1,179,176	33,105	10 55	28 2	1,591	28 401	3,162	15,402	.....	729	15,328	10,000	9,355	94,668	1,714	2,454	1,485	1,543	
73	Port Hope, Durham	4,091	1,459,190	31,916	7 80	21 9	646	29,609	5,487	2,224	47	783	57,500	.....	664	96,960	2,200	5,227	1,274	657	
74	Prescott, Grenville	2,926	917,105	21,406	7 32	23 3	57,162	19,842	2,842	5,802	.....	1,773	8,867	23,000	274	119,562	1,105	6,505	1,748	760	

No.	Disbursements, 1900. — *Continued.*										Assets on December 31, 1900.						Liabilities on December 31, 1900.				
	Streets bridges and parks.	Construction of buildings, waterworks, etc.	Charities.	County levy.	Payment on account of schools and education.	Sinking Fund and other investments and deposits	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits	Waterworks, gas and electric light plant.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
44	171	.....	14	.....	800	.....	186	.....	146	150	1,926	488	599	.....	.....	2,593	3,680	.....	2,245	.....	127	2,372
45	535	.....	2	.....	4,466	120	658	2,000	1,609	77	11,256	291	8,883	2,123	.....	11,032	22,329	1,910	28,341	1,064	.....	31,315
46	876	284	124	829	4,290	.....	3,298	46,000	4,914	55,276	120,460	.....	1,018	.....	20,000	26,560	47,518	.....	82,691	548	.....	83,239
47	2,191	225	134	783	8,939	.....	1,855	17,400	2,497	479	57,352	1,247	4,022	.....	.....	16,400	21,269	.....	40,507	5,000	.....	45,507
48	534	.....	20	401	1,705	10,369	1,676	3,200	2,110	382	22,943	3,914	1,499	13,333	23,800	8,420	50,966	.....	49,793	.....	.....	49,793
49	9,212	140	344	870	3,988	929	993	52,940	2,141	548	78,073	602	460	929	24,000	13,801	39,732	870	38,693	9,940	810	50,313
50	10,628	487	65	1,137	4,741	3,181	1,080	37,700	4,844	215	69,034	1,343	209	11,943	30,000	33,000	76,485	.....	112,088	.....	976	113,064
51	2,967	85	827	2,450	6,110	.....	13,967	1,500	3,786	427	38,756	4,974	13,364	.....	.....	22,315	40,653	9,175	60,162	.....	273	69,610
52	1,373	1,300	156	839	3,841	75	4,904	970	2,434	322	20,537	1,740	371	75	40,350	21,963	64,499	2,339	55,220	.....	.....	57,559
53	1,458	.....	55	.....	2,451	.....	2,204	5,200	2,767	318	19,871	58	1,436	.....	51,500	20,494	73,988	2,314	41,925	8,306	588	53,133
54	34,183	8,038	1,107	.....	11,803	.....	9,325	34,952	16,665	4,363	146,543	24,417	13,692	.....	197,776	230,847	466,732	.....	286,161	57,968	25,000	369,129
55	2,220	3,498	386	.....	3,533	2,512	150	9,450	4,090	4,434	36,053	.....	13,150	17,572	45,691	20,648	97,061	.....	77,305	8,569	3,446	89,260
56	2,195	22	124	.....	5,341	.....	2,469	1,000	5,080	478	22,879	629	15,358	.....	48,241	2,160	66,388	3,573	55,496	8,800	9	67,678
57	1,623	357	133	973	3,700	2,306	.....	4,000	2,414	580	18,675	.....	2,138	13,292	.....	29,317	44,747	1,304	25,500	3,857	.....	30,721
58	4,722	943	156	.....	5,734	5,266	2,867	16,000	5,572	779	47,889	.....	4,068	11,544	49,559	23,330	88,491	4,537	119,339	4,113	449	128,738
59	4,340	27,262	597	1,926	17,269	25,000	8,457	.....	10,221	1,745	112,287	12,291	9,636	25,000	102,900	77,377	227,204	10,781	218,312	.....	580	229,673
60	5,766	300	850	1,070	9,194	50,000	1,623	3,860	1,781	5,871	85,810	1	1,973	50,000	.....	19,451	71,425	.....	88,387	2,504	631	91,522
61	23,484	2,451	1,112	3,115	32,682	16,782	3,228	11,830	26,399	1,012	140,512	19,843	38,698	106,745	117,085	131,760	414,131	18,941	519,150	61,996	702	600,789
62	962	.....	29	1,770	4,009	234	1,701	2,300	3,600	149	16,230	.....	4,203	26,501	.....	7,638	38,342	.....	86,910	4,922	.....	91,832
63	1,952	824	371	1,284	12,424	750	7,284	14,039	3,106	1,083	52,771	45	141	5,750	59,021	54,000	118,957	.....	49,619	.....	.....	49,619
64	1,871	.....	20	412	2,925	603	400	2,300	801	373	11,532	371	1,307	5,130	.....	12,370	19,178	503	14,200	.....	.....	14,703
65	1,210	921	292	.....	4,435	.....	881	18,200	2,836	818	33,743	145	3,142	.....	37,957	7,720	48,964	497	34,567	3,900	27	38,991
66	5,628	2,137	3	2,392	9,454	2,402	5,112	1,182	5,863	1,055	45,865	.....	27,657	6,960	61,140	43,226	138,983	17,789	129,325	7,718	4,761	159,593
67	1,000	102	189	534	3,507	2,519	388	1,000	3,157	1,221	20,049	1,728	6,575	3,158	38,000	15,474	64,935	1,611	54,164	6,068	6,324	68,157
68	5,160	.....	458	775	7,567	.....	3,800	.....	1,249	246	25,725	6,063	1,238	.....	.....	26,927	34,228	4,400	19,800	.....	692	24,892
69	22,744	4,867	2,135	.....	27,765	21,506	.....	28,820	12,358	2,839	152,800	.....	8,351	100,491	.....	316,783	425,575	.....	286,045	85,839	5,861	377,745
70	4,529	1,404	483	1,295	11,163	.....	8,948	23,054	10,451	1,208	89,863	1,126	31,735	.....	186,898	51,332	271,091	10,702	211,214	25,608	2,217	249,741
71	2,598	13,775	936	2,429	7,875	.....	1,659	1,937	1,844	549	48,657	2,685	2,458	.....	53,947	12,117	71,207	3,125	48,079	1,478	1,119	53,801
72	3,767	3,193	536	.....	3,168	4,370	.....	12,900	12,636	41,529	92,196	2,473	17,367	31,431	127,182	29,020	207,473	3,742	254,275	34,076	1,810	293,903
73	3,048	3,714	454	1,354	8,700	902	1,503	54,000	10,476	1,613	85,162	1,798	9,268	19,212	60,154	196,809	287,241	.....	228,834	11,800	1,212	241,846
74	2,456	58,801	372	.....	6,015	.....	2,574	14,074	6,632	10,066	111,698	8,464	12,566	.....	114,953	55,669	191,652	3,228	152,410	.....	1,640	157,278

No.	Town Municipalities and Counties in which located.	Population, 1901.	Assessed values of real and personal property and income taxable, 1901.	Taxes imposed for all purposes, 1901.			Receipts, 1900.										Disbursements, 1900.				
				Total.	Per head.	Mills on $	Balance from 1899.	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water, gas and electric light rates.	Refunds from Sinking Funds and other investments.	Interest and dividends.	Borrowed for current expenses.	Borrowed on debentures	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Administration of justice, including police service.	
				$	$ c.		$	$	$	$	$	$	$	$	$	$	$	$	$	$	
75	Preston, Waterloo	2,219	684,215	11,387	5 06	16.6	1,043	11,167	564	.....	2,451	272	9,720	8,500	695	34,412	621	1,771	1,091	198	
76	Rat Portage, Rainy River.	4,797	1,672,673	51,306	10 70	30.7	57	45,941	3,949	7,025	4,249	.....	174,629	.....	2,041	237,891	2,768	10,759	3,699	2,419	
77	Renfrew, Renfrew	3,268	1,045,980	21,949	6 72	21.0	.....	19,709	1,212	4,824	....	105	23,976	11,000	148	63,974	650	3,294	1,664	540	
78	Ridgetown, Kent	2,494	674,120	15,793	6 33	23.4	352	10,800	1,428	....	1,751	33	41,753	730	442	57,289	463	2,372	704	470	
79	St. Marys, Perth	3,410	1,204,345	30,321	8 89	25.2	.....	28,401	1,308	537	15,517	51	12,500	15,000	1,813	75,127	693	3,301	1,893	813	
80	Sandwich, Essex	1,435	440,646	7,970	5 55	18.9	.....	7,362	641	1,417	....	2	5,600	2,500	....	17,522	428	2,470	435	107	
81	Sarnia, Lambton	8,012	2,257,387	60,094	7 50	26.6	5,304	54,087	2,450	15,929	452	2,411	64,452	62,464	1,333	208,882	3,112	14,332	2,221	3,016	
82	Sault Ste. Marie, Algoma.	6,323	2,924,275	47,147	7 46	16.1	....	35,073	1,212	.....	....	13,132	4,251	93,000	2,043	148,711	1,258	12,005	603	1,092	
83	Seaforth, Huron	2,280	631,035	15,492	6 80	24.6	2,373	14,575	1,176	720	6 600	1,010	18,583	.....	969	46,006	1,197	3,190	942	325	
84	Simcoe, Norfolk	3,007	944,130	22,867	7 60	24.2	.....	22,521	1,053	.....	.....	.....	8,592	.....	963	33,129	979	4,003	616	531	
85	Smith's Falls, Lanark	5,419	1,226,635	29,439	5 43	24.0	3,857	25,309	1,941	3,433	.....	.....	319,170	186,898	6,187	546,795	846	4,818	974	508	
86	Stayner, Simcoe	1,204	213,450	5,246	4 36	24.6	87	4,062	415	402	.....	....	3,860	....	207	9,033	631	766	209	32	
87	Strathroy, Middlesex	2,903	936,662	19,702	6 79	21.0	.....	20,040	1,101	.....	....	35	16,146	5,865	602	43,789	945	2,329	872	418	
88	Sturgeon Falls, Nipissing.	1,298	283,755	11,075	8 53	39.0	835	4,899	790	....	....	.....	4,100	.....	12	10,636	249	390	354	64	
89	Sudbury, Nipissing	1,795	341,403	13,831	7 15	40.5	615	11,316	2,137	6,371	.....	.....	857	13,600	358	35,154	1,040	8,402	1,898	15	
90	Thessalon, Algoma	906	188,045	7,801	6 40	30.8	255	4,813	312	1,079	.....	.....	3,872	.....	1,225	11,056	400	1,358	362	119	
91	Thornbury, Grey	753	238,055	4,198	5 58	18.1	1,519	4,449	100	....	56	1,500	.....	133	7,757	328	.....	419	53		
92	Thorold, Wellard	2,211	623,802	14,644	6 62	23.5	1,588	16,017	375	1,835	.....	.....	7,000	.....	351	27,166	697	2,016	978	590	
93	Tilsonburg, Oxford	2,117	741,950	16,947	8 05	22.8	5,560	16,704	1,560	....	5,690	1,023	7,000	3,000	89	40,626	655	1,598	658	705	
94	Toronto Junction, York	6,038	2,218,910	51,915	8 60	23.4	32,007	59,410	1,984	10,141	.....	807	....	....	6,373	110,722	2,075	15,349	5,517	4,244	
95	Trenton, Hastings	4,176	1,103,211	24,486	5 86	22.2	1,318	25,388	1,304	2,669	.....	626	105,030	....	117	136,452	1,190	2,954	2,580	1,389	
96	Uxbridge, Ontario	1,578	501,300	12,676	8 03	25.3	45	12,134	902	.....	.....	162	15,200	.....	49	28,492	486	1,175	662	443	
97	Vankleek Hill, Prescott	1,289	429,550	6,425	4 98	15.0	688	4,928	556	.....	.....	.....	1,080	.....	12	7,214	303	44	141	18	
98	Walkerton, Bruce	3,049	757,943	16,423	5 39	21.7	370	22,522	1,286	1,977	7,978	44	117,400	11,840	2,103	165,520	720	2,606	1,837	325	
99	Walkerville, Essex	1,592	2,105,516	25,724	16	18 12.2	11,161	27,409	580	.....	.....	53	....	3,150	81	42,437	1,379	3,117	1,005	2,000	
100	Wallaceburg, Kent	2,830	527,480	15,936	5 63	30.2	.....	11,920	934	.....	.....	.....	8,142	30,000	669	51,665	1,322	2,990	726	605	
101	Waterloo, Waterloo	3,574	1,448,115	28,105	7 86	19.4	.....	23,097	1,085	3,538	119	97	16,736	16,243	962	61,877	1,747	5,394	1,169	312	
102	Welland, Welland	1,944	631,475	17,184	8 81	27.2	1,663	15,959	613	3,404	11,000	413	....	42,113	1,528	76,093	1,381	2,777	1,687	175	
103	Whitby, Ontario	2,239	846,510	17,602	7 86	20.8	36	26,121	1,051	.....	.....	.....	38,600	.....	1,110	66,918	1,330	1,998	975	225	
104	Wiarton, Bruce	2,285	439,733	10,936	4 79	24.9	....	11,044	884	2,395	.....	305	18,941	15,400	101	49,070	431	2,455	878	317	
105	Wingham, Huron	2,192	605,897	13,904	6 34	22.9	1,452	13,765	1,113	409	1,369	86	9,300	14,803	545	42,842	649	1,420	508	412	

TOWN MUNICIPALITIES, 1900-1901.—*Concluded.*

No.	Disbursements, 1900.—*Continued.*									Assets on December 31, 1900.						Liabilities on December 31, 1900.				
	Streets, bridges and parks.	Construction of buildings, waterworks, &c.	Charities.	County levy.	Payment on account of schools and education.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Current loans repaid.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Balance on hand.	Taxes in arrears.	Sinking Fund and other investments and deposits.	Waterworks, gas and electric light plant.	Miscellaneous.	Total assets.	County levy and school rates due and unpaid.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
75	3,623	1,620	....	822	3,662	.....	2,645	10,010	1,839	4,816	32,618	1,794	39	4,000	.. ..	14,015	19,848	1 300	37,546	2,710	1,000	42,556
76	60,457	16,917	729	....	17,706	519	7,868	91,824	11,038	5,291	231,994	5,897	17,282	519	89,137	104,504	217,339	8,155	168,330	110,466	1,144	288,095
77	14,400	6,033	941	1,127	8,533	1,624	3,289	15,534	5,925	520	63,974	.....	12,713	3,830	93,336	15,359	131,238	4,729	117,460	23,976	857	147,022
78	1,157	1,200	227	1,728	5 800	761	2,855	35,500	3,086	366	57,289	....	7,746	840	.....	11,960	20,486	863	64,359	6,253	.....	71,475
79	4,016	18,666	384	....	6,666	3,351	5,722	14,471	5,645	2,281	67,741	7,386	1,933	3,351	48,970	36,510	98,150	....	92,561	.....	111	92,672
80	1,151	837	383	448	1,860	.....	595	5,166	1,786	227	16,293	1,229	7,033	....	19,000	12,689	39,951	2,762	25,817	5,806	1,234	35,609
81	24,797	31,423	2,637	2,270	15,720	3,682	17,864	60,424	14,273	5,098	200,869	8,013	1,272	33,931	125,000	122,282	290,498	....	288,622	29,345	6,675	324,642
82	6,207	2,266	448	....	6,843	910	93,275	....	20,672	3,132	142,711	....	10,855	278,011	....	30,732	319,598	....	390,572	6,793	17, 243	414,608
83	6,886	20	31	577	5,100	....	9,000	13,383	2,829	1,435	44,915	1,091	1,324	36,300	13,000	19,800	71,515	....	53,000	8,900	230	62,130
84	2,611	15	247	1,891	5,980	.....	4,760	5,294	4,930	1,472	33,129	....	2,124	.....	.....	25,639	27,763	....	69,885	8,592	202	78,679
85	11,492	94,615	180	2,128	8,450	.....	7,470	337,217	12, 991	3,969	485,648	61,147	535	.....	97,500	61,350	220,532	..	234,880	....	3,334	238,214
86	356	.....	23	522	1,860	.....	445	3,005	1,038	206	9,033	.....	1,278	.. ..	25,000	2,551	28,829	1,350	23,127	860	40	25,377
87	4,200	.....	127	1,172	6,335	.....	3,088	21,017	2,513	773	43,789	.. ..	813	8,000	....	15,761	24,574	1,151	37,963	1,146	100	40,360
88	1,760	3,696	85	.....	790	.....	258	1,800	429	750	10,625	11	3,145	....	14,000	1,000	18,156	1,972	5,830	4,201	13,240	25,243
89	1,381	1,297	308	.....	3,009	....	207	14,334	966	428	33,485	1,669	812	.....	57 297	4,273	64,051	..	59,229	.....	2,912	62,141
90	632	3,317	52	.....	1,521	100	....	1,612	172	279	9,904	1,152	333	308	20,000	5,000	26,793	....	14,870	3,744	....	18,614
91	1,972	.....	8	285	1,627	130	279	1,500	293	129	7,023	734	330	1,082	.....	2,058	4,204	1,474	5,048	.....	73	6,595
92	1,861	.....	224	946	4,885	.....	1,419	9,000	2,087	1,616	26,319	847	4,241	....	17,000	18,500	40,588	3,736	11,104	.....	626	15,466
93	6,513	.....	186	1,141	5,814	7,491	2,201	7,000	5,063	481	39,006	1,620	1,353	20,869	33,500	28,989	86,331	3,712	96,991	....	191	100,894
94	7,581	3,121	685	.....	14,258	3,068	2,000	5,000	10,893	8,958	82,679	28,043	22 615	3,608	174,000	527,335	755,001	9,400	1,065,650	.....	6,200	1,081,250
95	5,446	....	966	.....	6,271	438	537	104,030	8,571	1,628	135,400	1,052	85,109	8,628	15,000	117,867	177,596	1,790	146,744	18,420	13,393	175,347
96	1,358	431	481	539	3,600	1,459	.....	15,000	2,416	279	28,329	163	3,385	9,586	10,000	15,447	38,381	....	39,000	3,297	175	43,372
97	698	....	5	400	2,925	....	105	700	116	1,152	6,607	607	2,502	.....	.....	592	3,701	2,263	2,794	1,080	5,760	11,997
98	7,862	2,452	272	1,058	6,043	299	10,598	123,400	5,250	1,473	164,195	1,325	6,114	20,542	35,000	37,355	100,336	....	105,160	9,902	2,130	117,192
99	6,229	.....	316	....	3,583	.....	13,334	.....	2,858	1,483	35,298	7,139	47	.....	.....	28,444	35,630	....	29,892	....	1,465	31,357
100	5,707	75	165	684	4,689	5,000	4,235	12,957	3,503	3,235	45,903	5,762	10,017	5,600	.....	16,400	37,179	684	68,883	15,941	...	85,508
101	6,898	12,998	652	1,609	6,340	438	3,423	14,464	4,864	1,569	61,877	....	1,700	1,327	50,000	75,941	128,968	6,600	118,204	4,236	2,814	131,854
102	21,005	6,164	37	892	18,555	13,467	1,644	.....	4,337	478	72,499	3,494	4,691	13,701	57,063	25,774	104,723	3,100	102 728	.....	2,241	108,069
103	2,388	50	315	766	7,318	....	883	44,205	3,225	207	63,885	3,033	9,255	....	4,000	22,280	38,568	....	60,160	7,450	679	68,489
104	2,234	3,424	20	374	3,761	5,015	1,249	19,369	3,267	1,661	43,885	5,185	1,037	12,415	29,000	8,775	56,412	455	71,801	3,000	10,000	85,256
105	4,998	10	241	399	3,550	2,726	1,408	9,300	5,301	8,855	39,777	3,065	329	11,582	18,700	18,616	52,292	....	90,521	.. ..	1,781	92,302

STATISTICS OF CITY MUNICIPALITIES OF ONTARIO.

POPULATION, AREA, ASSESSMENT AND TAXATION, 1901.

RECEIPTS, DISBURSEMENTS, ASSETS AND LIABILITIES, 1900.

No.	City Municipalities and Counties in which located.	Population in 1901.	Assessed values of real and personal property and income taxable for 1901.	Taxes imposed for all purposes, 1901.			Receipts, 1900.						Disbursements, 1900		
				Total.	Per head.	Mills on $	Municipal and school taxes.	Licenses, fees, rents, fines; water and electric light rates, etc.	Refunds from Sinking Funds and other investments. Interest and dividends.	Borrowed for current expenses and on debentures.	Miscellaneous, including balance from 1899.	Total receipts.	Lighting of streets, water supply and fire protection.	Salaries of officers, other expenses of civic government.	Administration of justice, including police service.
			$	$	$ c.		$	$	$	$	$	$	$	$	$
1	Belleville ..... Hastings ..	10,104	3,902,573	87,809	8 69	22.5	89,525	27,959	10,235	267,815	9,298	404,832	28,869	8,184	5,016
2	Brantford ..... Brant	16,589	7,240,705	146,111	8 81	20.2	134,261	41,102	37,427	112,521	14,331	339,642	45,811	11,379	7,725
3	Chatham ..... Kent	8,658	3,596,777	99,426	11 48	27 6	104,246	15,894	94	88,791	7,305	216,330	17,316	7,249	6,510
4	Guelph .... Wellington	11,271	3,778,060	89,242	7 92	23.6	98,154	20,171	10,938	12,416	21,792	163,471	20,118	6,195	8,934
5	Hamilton..... Wentworth	53,781	27,100,825	538,314	10 09	19.9	536,072	234,641	27,123	609,233	66,346	1,473,415	117,563	54,431	62,232
6	Kingston .... Frontenac .	18,260	7,516,043	149,839	8 21	19.9	141,802	41,974	4,491	77,576	47,395	313,238	26,821	18,044	14,481
7	London ..... Middlesex .	39,183	17,291,918	437,552	11 17	25.3	423,111	118,465	53,510	789,414	5,230	1,389,760	86,519	36,862	43,180
8	Ottawa ..... Carleton ..	60,989	25,069,340	570,265	9 35	22.7	589,680	215,514	145,953	395,846	10,580	1,357,573	133,666	44,896	51,090
9	St. Catharines . Lincoln....	10,485	4,580,180	100,294	9 57	21.9	100,702	31,335	31,459	80,658	3,267	247,401	30,285	12,054	5,227
10	St. Thomas.... Elgin.....	11,903	4,567,137	128,991	10 84	28.2	132,435	24,073	4,874	489,208	16,175	666,765	26,182	12,951	4,661
11	Stratford ..... Perth	10,451	4,003,535	99,578	9 53	24.9	96,752	4,390	28,572	92,783	4,372	226,869	13,729	8,726	4,478
12	Toronto ..... York.....	205,887	130,399,865	2,903,113	14 10	22.3	2,945,505	758,679	937,871	1,192,862	491,044	6,325,961	495,641	277,710	335,268
13	Windsor ..... Essex	12,642	5,305,863	142,303	11 26	26.8	148,081	38,915	35,594	112,201	1,516	336,307	31,412	8,797	8,189
14	Woodstock .... Oxford	9,257	2,761,550	65,399	7 06	23 7	60,384	23,377	37,651	64,309	19,219	204,940	21,040	4,506	2,606

POPULATION, AREA, ASSESSMENT AND TAXATION, 1901.

RECEIPTS, DISBURSEMENTS, ASSETS AND LIABILITIES, 1900.

No.	Disbursements, 1900.—*Continued.*						Assets on December 31, 1900.					Liabilities on December 31, 1900.			
	Streets, bridges, parks, buildings, waterworks and electric light plant.	Payment on account of schools and education.	Sinking Fund and other investments and deposits.	Repayment of debentures, temporary loans and interest.	Miscellaneous, including Board of Health expenses, charities, etc.	Total disbursements	Taxes in arrears.	Sinking Fund and other investments and deposits.	Waterworks, gas and electric light plant.	Miscellaneous, including balance on hand.	Total assets.	Debentures outstanding.	Temporary loans.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
1	14,022	16,232	48,915	268,941	14,373	404,562	85,703	107,592	180,725	183,425	557,445	503,115	261,149	.....	764,264
2	112,449	33,475	38,906	72,154	15,672	338,571	3,134	336,203	317,509	522,288	1,179,134	1,059,760	65,979	26,107	1,151,846
3	49,296	20,399	1,600	99,900	9,692	211,962	32,666	2,703	*203,917	326,949	566,235	581,611	115,427	3,201	703,239
4	24,554	26,423	21,108	42,638	8,307	158,277	12,925	464,545	147,711	197,413	722,594	606,726	22,000	4,582	633,308
5	473,029	155,470	147,923	356,401	101,462	1,468,511	338,468	487,739	1,952,452	2,061,701	4 843,360	3,954,394	186,958	13,291	4,154,643
6	38,269	35,160	42,219	115,524	10,169	300,607	54,082	97,540	344,406	311,614	807,642	973,670	48,995	23,783	1,016,448
7	198,713	109,141	201,436	661,602	40,070	1,378,323	49,367	1,587,663	849,819	616,546	3,053,395	3,008,150	154,722	67,855	3,230,727
8	352,859	129,187	252,148	250,452	139,156	1,353,854	553,300	1,636,015	2,000,000	1,342,187	5,531,502	4,932,829	542,940	211,774	5,687,543
9	45,692	24,325	13,056	103,742	11,759	246,140	35,227	68,895	360,104	277,432	741,658	864,523	61,858	7,282	933,663
10	36,407	25,723	16,183	521,468	9,235	652,810	27,031	105,240	†152,000	379,551	663,822	607,204	32,000	12,697	651,901
11	34,347	22,750	30,656	99,301	12,168	226,055	30,133	86,320	.....	100,640	217,093	474,421	35,031	4,726	514,178
12	1,287,408	786,512	522,834	2,250,225	214,449	6,170,047	884,919	5,432,991	4 349,385	12,228,554	22,895,849	21,231,245	1,101,162	1,288,602	23,621,009
13	32,379	29,715	32,190	182,734	10,864	336,280	54,155	223,723	‡275.000	202,043	754,921	755,818	49,579	4,751	810,148
14	25,959	16,351	11,218	106,058	6,871	194,609	11,454	158,469	168,314	101,023	439,260	465,723	16,178	3,778	485,679

* Including $17,000 for light plant. † Including $2,000 for light plant. ‡ Including $25,000 for light plant.

FINANCIAL STATEMENT.—

Showing abstract statement of Receipts, Disbursements, Assets and Liabilities

No.	Counties	Receipts, 1900. Balance from 1899.	Rates from local municipalities.	Licenses.	Fees, rents, tolls, fines, etc.	Surplus fees from Registrar.	Interest and dividends.	From Legislature for Schools.	From Legislature for Administration of Justice.	Refund of moneys loaned or invested.	Money borrowed for current expenses.	Money borrowed on debentures.	Non-resident taxes collected.
		$	$	$	$	$	$	$	$	$	$	$	$
1	Brant	11,779	14,482	135	265	42	288	1,965	3,850	..	.....	5,000	177
2	Bruce	6,845	34,937	1,040	171	2,049	73	5,225	3,242	6,000	10,000	..	2,750
3	Carleton	...	24,295	273	404	388	1,079	3,668	6,258	..	43,539	15,000	1,000
4	Dufferin	69	16,845	528	171	4	474	2,408	577	7,561	1,500	....	412
5	Elgin	8,882	31,101	476	...	333	191	3,874	3,245	.....	40,000	..	289
6	Essex	2,686	30,100	180	191	1,445	151	3,893	5,262	.....	31,500	16,000	5,014
7	Frontenac	137	31,869	215	2,811	15	80	2,715	2,674	.. ..	17,783	.. ..	1,086
8	Grey	.....	47,108	683	124	516	863	6,615	2,547	..	....	.....	1,429
9	Haldimand	1,426	19,117	90	.....	65	2	1,958	2,058	.....	..	.....	126
10	Haliburton	496	6,077	52	145	.....	...	2,738	150	....	5,000	....	503
11	Halton	5,744	9,010	223	24	....	63	1,737	1,530	..	3,200	.....	168
12	Hastings	74	47,486	250	469	591	2,868	4,692	4,170	23,024	39,258	...	1,939
13	Huron	596	35,868	1,385	42	2,718	816	6,052	3,011	3,275	16,760	....	262
14	Kent	189	32,087	410	2,437	1,276	52	4,038	7,167	16,000	24,121	.....	1,534
15	Lambton	2,117	32,643	258	2	1,375	202	4,519	3,458	.....	10,000	...	4,660
16	Lanark	.....	18,673	230	51	....	....	2,987	2,553	.....	17,236	....	250
17	Leeds and Grenville	191	26,380	388	43	.....	810	4,353	4,116	...	...	15,000	402
18	Lennox and Addington	9,457	27,555	332	110	....	197	2,753	1,851	.....	....	.....	38
19	Lincoln	1,839	21,155	348	38	188	389	1,841	3,043	....	5,000	.....	2,085
20	Middlesex	26,620	58,992	240	85	222	1,344	5,671	10,397	67	.....	20,000	1,164
21	Norfolk	118	26,121	134	134	.....	14	2,894	1,778	.....	.....	.....	989
22	Northumberland & Durham	2,509	43,729	708	94	17	218	5,539	2,685	.....	10,000	..	889
23	Ontario	15,041	18,722	298	16	244	...	3,905	2,347	....	30,000	.....	512
24	Oxford	30,462	48,385	562	94	672	687	3,943	2,268	.....	.....	.....	151
25	Peel	3	17,797	240	36	....	8	2,181	3,441	.....	13,000	....	203
26	Perth	19,476	36,857	482	160	41	523	3,697	3,502	....	10,000	....	178
27	Peterborough	6,868	15,765	355	124	....	230	3,055	1,237	100	13,043	.....	821
28	Prescott and Russell	782	13,404	260	169	.....	160	2,406	993	....	2,940	....	4,083
29	Prince Edward	446	16,636	135	92	....	15	1,872	1,774	.....	1,189	....	27
30	Renfrew	5,837	19,113	310	39	52	268	5,420	1,804	.....	...	...	688
31	Simcoe	10,717	52,987	575	333	1,837	....	7,557	4,667	..	15,000	....	3,008
32	Stormont, Dundas and Glengarry	386	23,843	1,466	247	....	138	6,094	2,039	.....	4,000	1,491	1,314
33	Victoria	665	20,368	544	1,812	31	.....	3,303	1,410	....	14,000	..	1,433
34	Waterloo	66	29,208	377	55	560	.....	2,726	2,952	....	27,698	5,000	23
35	Welland	4,240	20,361	231	39	557	..	2,325	3,420	.....	5,733	...	647
36	Wellington	20,635	53,163	334	50	..	187	4,412	3,538	....	20,000	....	895
37	Wentworth	23,208	21,181	149	776	803	851	3,088	5,728	12,372	...	.....	243
38	York	.....	55,937	310	452	90	.....	4,895	21,543	....	31,930	....	1,148

COUNTY MUNICIPALITIES, 1900.

of the county municipalities of Ontario for the year ending December 31, 1900.

Receipts.—*Continued.*			Disbursements, 1900.									
Towns or cities separated from county, for various services.	Miscellaneous.	Total receipts.	Attendance at meetings of council and committees.	Allowances, salaries and commissions.	Printing, advertising, postage and stationery.	Insurance, heating, lighting and care of buildings.	Law costs (including salaries).	Other expenses	Roads and bridges.	Grants to local municipalities for roads and bridges.	Buildings and other works.	No.
$	$	$	$	$	$	$	$	$	$	$	$	
3,401	76	41,460	629	1,479	686	2,027	200	394	32	977	6,090	1
.....	1,689	74,021	944	3,590	683	1,068	147	169	2,523	4,300	.....	2
12,500	5,084	113,428	1,191	2,308	630	81	751	755	8,423	.....	161	3
.....	216	31,163	376	1,218	353	617	103	1,547	115	.....	.....	4
2,950	1,262	92,603	999	2,480	446	1,584	141	412	20,174	108	13,937	5
.....	3,959	100,381	693	2,620	646	701	100	168	674	.....	25,497	6
4,460	14	63,859	841	1,725	593	75	39	666	2,258	75	.....	7
.....	539	60,424	1,159	2,180	519	1,356	187	135	2,250	118	654	8
.....	8	24,870	662	1,126	354	394	.....	94	438	175	.....	9
.....	64	15,225	236	625	332	71	.....	31	194	.....	.....	10
.....	.....	21,699	265	1,029	323	344	.....	832	647	.....	.....	11
4,360	238	129,419	1,2 5	3,310	504	324	.....	.....	16,246	6,118	62	12
.....	449	71,234	999	2,950	713	722	9	82	5,754	.....	507	13
4,921	6,208	100,440	1,799	2,485	444	2,237	243	96	10,554	510	7,640	14
.....	741	50,975	748	2,840	569	2,075	38	708	3,338	150	353	15
.....	424	42,404	714	1,575	683	724	5	41	342	.....	.....	16
3,775	966	56,424	1,065	2,440	928	1,764	....	575	168	.....	378	17
.....	249	42,542	748	1,166	427	1,383	939	138	1,742	75	.....	18
3,131	3,527	42,584	1,035	2,507	324	1,934	160	1,226	3,541	.....	4,459	19
8,385	1,258	134,445	1,483	4,296	602	356	.....	.....	2,388	102	259	20
.....	399	32,581	786	1,329	677	534	3	164	2,554	.....	1,036	21
.....	230	66,618	2,102	2 135	646	721	99	2,043	924	775	1,503	22
....	567	80,652	880	1,630	931	1,173	...	305	1,109	.....	60	23
.....	*2,351	89,575	1,782	3,021	615	397	25	99	5,275	.....	6,282	24
.....	283	37,192	423	1,429	416	396	.....	15	1,297	.....	68	25
1,155	2,249	78,320	644	1,710	165	1,651	...	242	2,392	3,730	.....	26
2,505	1,707	45,808	1,085	1,200	974	1,568	16	22	2,827	1,792	.....	27
.....	996	26,193	880	1,057	189	249	254	198	5,269	200	87	28
.....	.....	22,186	374	800	429	607	..	653	2,067	150	169	29
.....	199	33,730	594	1,612	489	817	260	74	1,113	.....	.....	30
.....	†17,074	113,755	2,646	3,660	736	471	569	507	3,542	1,276	....	31
.....	‡3,512	44,530	728	1,725	606	1,168	...	1,002	97	.....	766	32
967	322	44,855	1,173	1,88	1,137	1,826	38	293	3,499	550	604	33
.....	56	68,721	1,136	1,484	1,064	1,772	27	132	502	.....	5,000	34
1,608	719	39,880	598	1,353	229	835	14	72	93	146	859	35
3,343	306	106 853	1,010	2,453	569	65	93	433	16,307	2,502	1,467	36
6.037	670	75,106	2,235	2,346	502	2,520	660	2,482	6,415	.....	.....	37
26,414	4,675	147,394	2,739	3,680	1,680	1,353	1,553	2,462	2,258	.....	915	38

* Including $1,004 from adjoining counties.
† Including $15,547 from bondsmen and estate of ex-Treasurer, Sandford.
‡ Including $3,500 for adjustment of "Bills Payable" account.
For new House of Refuge.

FINANCIAL STATEMENT.—

Disbursements, 1900.—*Continued.*

No.	Counties.	Support of the poor and other charities.	Administration of Justice, gaol maintenance, etc.	Grants to schools and other payments on education.	Sinking Fund and other investments and deposits.	Debentures redeemed.	Interest paid on debentures.	Refund of money borrowed for current expenses.	Interest or discount on loans and advances.	Non-resident taxes paid local municipalities.	Miscellaneous.	Total disbursements.
		$	$	$	$	$	$	$	$	$	$	$
1	Brant	1,146	8,322	3,781	....	2,759	697	....	....	177	690	30,086
2	Bruce	4,366	10,457	12,926	12,000	698	774	10,000	94	2,750	2,844	70,333
3	Carleton	2,450	21,396	5,566	2,548	....	2,250	55,297	1,478	1,000	2 718	108,903
4	Dufferin	69	5,265	5,074	8,309	1,000	780	3,500	84	1,059	1,266	30,733
5	Elgin	5,311	8,965	11,212	.. ....	2,864	1,893	16,000	274	420	267	87,485
6	Essex	454	13,013	9,907	.....	968	946	30,500	642	4,898	2,124	94,557
7	Frontenac	1,025	12,115	5,453	.....	20,500	12,810	3,050	144	1.842	352	63,761
8	Grey	410	13,314	14,258	18,838	.....	1,100	..	..	2.036	1,910	60,424
9	Haldimand	307	7,687	8,191	.....	.....	....	1,600	402	126	1,052	22,604
10	Haliburton	.... ..	1,258	3,341	.....	1,000	82	6,500	85	503	....	14,258
11	Halton	.	5,313	5,570	....	..	..	3,200	38	438	836	18,838
12	Hastings	379	16,311	10,862	*10,657	20,701	3,304	35,017	1,501	1,930	894	129,335
13	Huron	4,798	9,921	13,954	6,360	.	2,945	7,000	77	355	1.542	58,685
14	Kent	4,147	19,834	10,247	16,000	5,903	2,506	12,589	1,219	1,175	799	100,428
15	Lambton	3,893	9,666	14,197	.....	628	549	11.000	82	4,806	2,083	57,727
16	Lanark	786	8,283	7,755	.....	.....	.....	18,097	399	250	2,750	42,403
17	Leeds and Grenville	5,051	7,755	14,461	2,102	.....	2,675	14,300	714	397	920	56,233
18	Lennox and Addington	570	5,597	11,818	.....	5,800	5,004	...	7	322	125	35,861
19	Lincoln	2,998	7,316	6,709	.....	2,535	535	3,000	285	1,498	1 996	42.058
20	Middlesex	11,476	26,818	14,759	22,400	20,000	24,316	.....	...	1,229	1,236	131,720
21	Norfolk	3,710	7,233	8,623	.... ..	....	.....	.....	295	989	403	28,336
22	Northumberland & Durham	160	16,132	14,671	2,157		700	16,000	203	406	907	62,284
23	Ontario	487	7,958	10,246	.....	1,302	718	36,000	336	729	1,098	64 962
24	Oxford	5,589	9,579	8 858	.....	6,586	4,819	.....	...	283	166	53,376
25	Peel	2,169	7,506	6,353	.....	1,600	199	13,104	371	203	1,384	36,933
26	Perth	4,961	10,937	8,808	8,692	1,652	9,139	13,500	91	191	1,028	69,533
27	Peterborough	245	9,532	5,067	1,043	1,413	1,328	10,500	578	985	1,337	41,512
28	Prescott and Russell	.....	6,243	7,357	.....	...	...	.....	634	2,118	900	25,635
29	Prince Edward	310	4,636	4,810	15	5,000	150	.....	214	27	1,775	22,186
30	Renfrew	225	5,995	9,359	1,267	2,192	1,648	.....	....	681	737	27,063
31	Simcoe	6,999	12,841	17,933	.....	1,746	1,898	50,000	259	3,028	2,012	110,118
32	Stormont, Dundas and Glengarry	913	7,323	16,646	.....	4,794	1,467	4.000	285	1,314	416	43,250
33	Victoria	468	7,931	7,018	.....	....		14,000	644	1,313	2,085	44,460
34	Waterloo	8,531	7,607	9,025	.....	1,259	949	28,899	505	23	703	68,618
35	Welland	3,484	11,831	8,252	.....	....	....	5,733	125	603	802	35,029
36	Wellington	8,201	12,215	10,386	.....	.....	.....	28,000	287	714	5,026	89,728
37	Wentworth	1,000	12.298	6,289	.....	11,999	1,130	.	....	243	2,768	52,887
38	York	6,774	57,305	12,633	.....	6,289	2,189	40,792	1,070	1,216	2,426	147,394

* Including $3,446, special levy in general account.

COUNTY MUNICIPALITIES, 1900.—*Concluded.*

Assets on December 31, 1900.						Liabilities on December 31, 1900.							No.
Cash in treasury.	Rates due from local municipalities.	Sinking fund and other investments in stocks, mortgages, debentures, etc., special debenture, etc.	Land, buildings, furniture, etc.	Miscellaneous.	Total assets.	School grant unpaid.	Railway debentures out standing (principal).	All other debentures out standing (principal).	Loans for current expenses and interest due on same.	Local municipalities for non-resident taxes collected.	Miscellaneous.	Total liabilities.	
$	$	$	$	$	$	$	$	$	$	$	$	$	
11,374	.....	.....	106 000	..	117,374	.....	.....	10,190	.....	.....	.....	10,190	1
3,688	6 636	12,000	80,000	1,906	104,230	.....	.....	18 630	.....	.....	7,873	26,503	2
4,525	21.787	18,309	185,000	...	229,621	.....	.....	60,000	.....	.....	...	60,000	3
430	4,871	10,252	40,000	597	56,150	1,200	.....	12 000	500	181	1,115	14,996	4
5,116	30,792	.....	171,000	*17,182	224,090	271	.....	46,996	33,000	.	2,700	82,967	5
5,830	21,434	.....	95,500	6,212	128,976	.....	.....	88,670	24,000	116	2,273	65,059	6
296	27,300	2 000	117.000	11,945	158,541	.....	128,500	...	17,783	223	...	146,506	7
....	2,866	†43,783	87,638	668	134,955	60	.....	26,000	.....	222	13	26,295	8
2.242	1,231	.....	30,000	54	33,527	.....	.....	.....	.....	....	254	254	9
967	1,411	.. ....	.....	38	2,416	21	.....	.....	.....	..	550	571	10
2,864	2,832	.....	50,000	203	55,899	.....	.....	.....	.....	.....	...	...	11
84	37,594	48,892	60,000	.....	146,570	500	10,000	27,392	44,258	10	4,237	86,397	12
12,546	22,319	23,647	77,000	.....	135,512	...	.....	73,000	16,856	539	....	90,395	13
13	15,566	.....	‡155,000	6,638	177,217	.....	.....	44,653	24,121	413	....	69,187	14
2,252	13,061	.....	54,500	.....	69,813	.....	.....	13,090	4,000	1,304	85	18,479	15
.....	.....	.....	54,000	.....	54,000	.....	.....	.....	236	.....	.....	236	16
191	15,295	19,636	138,000	926	174,048	25	.....	60,000	891	177	400	61,493	17
6,681	11,894	.....	55,000	.....	73,575	.....	.....	80,500	.....	19	....	80,519	18
526	12 875	.....	103.500	1,961	118,862	514	.....	4,151	4,000	1,048	105	9,818	19
2,725	§8,506	§76,468	86,000	10,334	234,033	....	.....	486,260	.....	99	8,118	494,477	20
4,245	2,764	.....	59,000	.....	66,009	.....	.....	.....	....	...	.....	.....	21
4,334	10,706	6,157	51,000	541	72,738	.....	.....	20,000	....	888	.	20,888	22
15,690	4,946	.....	50,000	149	70 785	...	.....	13,059	15,101	331	34	28,525	23
36,199	.. ..	.....	190,000	808	227,007	70	.....	113,888	.....	190	2,579	116,727	24
259	.....	.....	76,386	1,500	78,145	....	.....	3,387	.....	....	1.400	4,787	25
8,787	16 043	17,123	125.000	1,044	167,997	.....	120,000	81 818	....	70	2,941	204,829	26
4,296	13,516	8,408	93,355	1,964	121,539	839	.....	38,952	20,191	492	5,544	66,018	27
558	13,276	.....	20,500	4,006	38,340	...	.....	.....	19,553	1,965	261	21,779	28
.....	1,564	15	32,500	.....	34,079	15	.....	.....	1,189	....	..	1,204	29
6,667	14,249	8,020	50,000	762	79 698	232	.....	31,212	.....	769	702	32,915	30
3,637	18,087	¶10,300	156,000	14,069	202,093	300	.. ....	46,575	.....	...	5,814	52,689	31
1,280	14,659	.....	61,000	700	77,639	...	.....	30,331	3,500	.....	855	34,686	32
395	17,539	.....	68,663	1,186	87,783	205	.....	... .	19,000	585	.....	19,790	33
103	....	.....	89,000	769	89,872	5	.....	27,467	698	....	....	28,170	34
4,851	958	.....	129,536	85	135,430	.....	.....	.....	.....	44	.	44	35
17,125	31,658	.....	80,000	3,595	132,378	3,400	.. ....	.....	20,000	493	12,492	36,385	36
22,219	.....	.....	a90,000	6,078	118,297	.....	.....	19,001	.....	.....	2,099	21.100	37
. ..	21,400	.....	100,000	46,998	168,398	.....	.....	32,269	31,930	1,117	3,898	69,214	38

* Including $11,748 due from St. Thomas on account of new court house.
† Including $32,533 deposited to credit of general account.
‡ Including $61,700 for iron bridges.
§ Including $15,000 loan to Victoria Hospital and $7,800 Hospital Trust Funds.
¶ Omitting $8,300 written off, being $8,000 from Northern Railway stock and $300 from agricultural building stock
Including $20,000 for iron bridges.
a Including $10,000 for roads.

FINANCIAL STATEMENT.—TOWNSHIP MUNICIPALITIES.

Summary statement showing the totals for all townships in Ontario of the several items of Receipts, Disbursements, Assets and Liabilities for the ten years ending December 31st. 1891-1900.

Schedule.	1900.	1899	1898.	1897.	1896.	1895.	1894.	1893.	1892.	1891.
RECEIPTS.	$	$	$	$	$	$	$	$	$	$
Balance from the previous year	502,223	539,813	541,624	444,150	559,452	478,431	476,233	539,298	501,217	474,360
Ordinary municipal revenue:										
Municipal and school taxes	4,812,372	4,675,154	4,462,288	4,598,830	4,286,861	4,478,627	4,573,620	4,463,048	4,709,576	4,440,478
Licenses (liquor and other)	41,736	41,878	43,019	46,723	47,758	49,539	62,084	64,577	70,664	72,337
Fees, rents, fines, etc.	14,265	13,811	12,716	12,423	11 873	12,363				
Refund of loans, investments and deposits	207,790	164,532	505,476	199,050	273 483	232,825	291,747	226,983	234,690	517,726
Interest and dividends	55,170	55,332	75,461	72,385	65,774	68,217				
Loans:										
Money borrowed for current expenses	542,259	514,505	456,217	450,533	548,195	525,677	591,014	457,466	419,335	580,354
Money borrowed on debentures for—										
Schools	57,886	69,572	69,597	56,673	49,982	61,850	54,324	57,397	94,707	47,160
Drainage			261,022	293,924	163,023	260,269	285,460	252,148	300,999	332,504
Other purposes	258,523	289,106	48,438	20,800	49,445	96,457				
Premiums on debentures sold			7,690	11,625	4,068	11 798	204,930	127,958	129,494	191,711
Grants from county for roads, etc			15,895	22 879	39,467	36,395				
Miscellaneous	102,094	128,384	123,393	78,621	86,486	94,222				
Totals	6,594,318	6,492,087	6,622,836	6,308,516	6,186,167	6,406,670	6,539,412	6,188,870	6,460,682	6,656,630
DISBURSEMENTS.										
Expenses of municipal government:										
Allowances, salaries and commissions	309,162	300,387	294,313	292 206	287,272	285,335	285,560	285,188	287,882	281,802
Law costs, including salaries	49,098	43 372	43,690	51,865	34,090	60,491	138,693	128,700	137,748	119,487
Other expenses of municipal government	99,468	105,328	96,166	93,321	89,827	84,952				
Construction works:										
Roads and bridges	894 104	881,068	772,947	706,09	702,212	639,241	796,775	806,781	743,651	755,323
Buildings and other works	15,844	19,896	15,381	21,891	16,429	8 883	7,393	11,836	17,201	23,515
Drainage works	284,563	327,578	311,311	275,869	238 919	227,692	297,286	275,941	237,215	275,551
Support of the poor and other charities	54,417	55,943	59,871	58,763	58,543	66,655	65,621	62,332	66,849	68,421
County treasurer for levy	953,191	976,863	910,094	958,975	984,609	1,091,953	1,686,752	1,098,967	1,204,116	1,145,037

Payments on schools and education	1,984,747	1,960,373	1,926,978	1,935,503	1,813,537	1,796,237	1,831,241	1,820,007	1,904,746	1,782,303
Sinking fund investments and deposits	79,947	69,128	114,112	89,621	118,214	123,143	285,331	149,768	165,841	194,072
Other investments and special deposits	80,341	72,497	121,068	160,427	161,021	162,983				
Loans repaid:										
Debentures redeemed (principal)										
School	67,215	63,834	60,969	66,140	65,230	67,409	433,996	355,363	365,012	641,382
Drainage			194,044	182,884	219,201	219,588				
All other	311,005	327,958	390,029	72,186	100,693	85,851				
Interest on loans, advances, debentures	143,441	145,803	177,617	168,620	177,504	183,554	180,027	177,693	187,720	200,504
Moneys borrowed for current expenses	558,236	498,661	430,588	518,518	537,482	572,968	524,212	407,663	460,646	508,355
Board of Health	24,378	25,391	17,979	17,449	15,288	22,293	123,091	132,398	142,857	159,661
Miscellaneous	110,614	115,389	145,866	96,563	121,933	147,991				
Totals	6,019,761	5,989,864	6,083,023	5,766,892	5,742,017	5,817,218	6,060,981	5,712,637	5,921,384	6,155,413
ASSETS.										
Cash in treasury	574,557	502,223	539,813	541,624	444,150	559,452	478,431	476,233	539,298	501,217
Taxes in arrears	1,285,700	1,383,475	1,438,023	1,412,171	1,577,267	1,610,480	1,596,099	1,572,817	1,373,503	1,511,872
Sinking Fund investments and deposits	234,632	233,256	213,767	498,619	452,819	425,269	1,442 922	1,371,296	1,396,451	1,373,830
Other investments and special deposits	979,676	1,028,667	1,078,088	1,067 449	1,062 530	1,069,519				
Lands, buildings and other property	429,001	409,171	414 704	403,904	379,729	355,305	354,010	359,473	335,527	352,641
Miscellaneous	918,667	892,919	619,615	616,822	564,968	436,379	456,907	561,903	530,727	462,641
Totals	4,422,233	4,449,710	4,304,010	4,539,589	4,481,463	4 456,404	4,328,369	4,341,722	4,175,506	4,202,201
LIABILITIES.										
County levy	380,823	413,738	428,262	438,311	474,425	574,634	563,909	537,085	470,342	506,361
Local school rates	278 484	281,551	299,667	292,071	333,291	299,082	280,176	273,812	229,731	240,810
Debentures outstanding (principal) for—										
Aid to railways	509,475	584,608	621,053	984,196	1,015,669	1,057,852	1,058,761	1,106,290	1,120,100	1,178,627
Schools	458,943	468,180	462,438	454,119	463,586	478,834	481,665	496,311	505,250	479,737
Drainage			1,322,734	1,253,902	1,142,862	1 266,232				
Other purposes	1,585,747	1,563,796	243,473	224,874	244,787	249,725	1,401,841	1,437.222	1,464,080	1,460,875
Due Sinking Fund			20,171	20,857	18,480	25,001				
Loans for current expenses and interest	304,074	318,370	281,720	257,215	331,123	314,116	382,096	308,167	259.168	3 0,020
Miscellaneous	199,947	179,821	208.691	167,768	158 481	174,752	127,699	171,949	149,846	146,364
Totals	3,717,495	3,810,064	3,888,209	4,093,313	4,782,704	4,380,228	4,296,147	4,331,236	4,198,517	4,312,194

The total receipts do not include Legislative grant for schools, this not being considered a municipal transaction. This also refers to towns, villages and cities.

Table beginning on page 2, gives condensed statistics of each township.

FINANCIAL STATEMENT—VILLAGE MUNICIPALITIES.

Summary showing the totals for all villages in Ontario of the several items of receipts, disbursements, assets and liabilities for the eight years ending December 31st, 1893-1900.

Schedule.	1900.	1899.	1898.	1897.	1896.	1895.	1894.	1893.
RECEIPTS.	$	$	$	$	$	$	$	$
Balance from previous year	97,738	*88,900	82,474	88,589	78,973	67,269	72,950	74,284
Ordinary municipal revenue:								
Municipal and school taxes	582,027	552,142	578,449	576,892	541,849	545,809	526,672	499,040
License (liquor and other)	27,571	29 296	31,771	33,687	34,487	34,872	42,746	45,274
Fees, rents, fines, etc.	10,234	9 675	9,778	8,301	8,941	8,738		
Water rates, etc	25,659	19,492	25,672	17,765	14,897	15,344	12,989	10,426
Refund of loans and special deposits	26,679	41,216	31,569	37,047	22,235	25,905	17,266	13,495
Interest and dividends	4,045	5,290	5,309	5,932	5,650	6,223		
Loans for current expenses	204,886	174,967	180,411	180,273	165,279	176,428	135,745	119,191
Money borrowed on debentures for—								
Schools		17.875	28,350	22,100	7,443	29,100	23,050	20.300
Other purposes	95,506	121,002	131,450	92,690	84,706	67,797	79,577	35,325
Premiums on debentures sold			4,719	6,519	1,876	5,099	32,731	14,053
County grants			1,966	2,391	4,148	2,887		
Miscellaneous	17,556	18,321	14,533	21,453	18,309	15,340		
Totals	1,091,901	1,078,176	1,126,451	1,093,139	988,793	1,000,811	943,726	831,388
DISBURSEMENTS.								
Expenses of municipal government:								
Allowances, salaries, commissions	35,562	34,383	34,967	35.661	36,604	37,793	37,139	39.336
Lighting of streets, water supply and fire protection	60,190	47,806	51,680	51,304	47,832	46,161	41,590	32,251
Law costs (including salaries)	9,220	5.481	5,132	7,794	6,119	5 983	28,392	29,794
Other expenses of government	22,420	22,340	22,776	22,986	22,134	23,054		
Construction works:								
Streets, bridges and parks	145,915	128,569	107,222	98,659	98,290	99,662	93,572	94,408
Buildings and other works	10,768	9,016	30,044	45.048	11,891	20,570	65,191	27,263
Water and electric light works	55.754	91,589	61,097	29,223	30,885	39,024		
Support of the poor and other charities	6,249	5,456	6,836	5,365	5,842	6,552	5,858	5,064
Administration of justice, police service	8,261	8,860	11,440	9,761	8,477	7,952	7,064	4,255

County treasurer for levy	38,553	40,466	43,019	43,621	36,116	42,424	44,628	39,511
Payments for schools and education	214,789	223,104	243,139	250,080	223,983	242,466	232,204	214,447
Sinking fund investments and deposits	24,324	22,215	25,185	20,717	21,461	14,606	35,679	14,560
Other investments and special deposits	14,146	17,618	16,492	11,870	7,197	12,276		
Debentures redeemed { Schools	18,686	25,947	24,185	25,229	31,542	18,851	52,120	60,624
Debentures redeemed { All other	48,799	46,327	72,667	53,196	72,300	35,135		
Interest on loans and debentures	61,713	58,264	66,119	65,401	68,207	68,612	62,352	63,902
Money borrowed for current expenses	188,710	157,058	182,784	192,860	137,119	176,133	134,536	107,713
Board of Health	3,240	3,018	2,767	2,931	2,740	2,962	36,132	25,280
Miscellaneous	25,118	32,928	28,502	38,959	31,366	21,217		
Totals	992,417	980,438	1,036,053	1,010,665	899,605	921,433	876,457	758,438
ASSETS.								
Cash in treasury	99,484	97,738	90,398	82,474	89,188	79,378	67,269	72,950
Taxes in arrears	110,982	125,033	147,720	152,293	161,795	147,273	139,335	134,463
Sinking fund investments and deposits	87,328	†85,383	95,125	87,651	92 526	86 181	132,914	136,838
Other investments and special deposits	59,247	49,401	47,142	45,882	47,278	48,742		
Water works and electric light plant	a542,864	512,294	523,792	455,600	381,913	368,262	802,525	723,877
Other buildings and property	563,398	542,684	512,893	514,477	493,148	495 053		
Miscellaneous	109,646	76,329	49,358	62,116	38,798	61,606	57,178	48,309
Totals	1,572,949	1,488,862	1,496,428	1,400,193	1,304,646	1,286,495	1,199,221	1,116,437
LIABILITIES.								
County levy	18,606	15,836	18,324	19,533	20,845	16,692	15,041	19,880
Local rates	52,303	58,683	56,346	62,659	65,478	55,432	50,089	47.694
Debentures (principal) outstanding for—								
Aid to railways	36,768	†50,234	63 150	72,617	92,132	115,017	119,280	122,315
Schools	265,727	‡284,413	316,908	312,743	320,872	344,971	334,004	328,444
Other purposes	885,424	‡825,251	844,382	774,925	750,092	715,815	679,658	631,717
Due sinking funds	b16,938	16,495	20,004	19,014	17,900	13,569	68,755	66,157
Loan for current expenses and interest	90,778	§75,092	65 422	70,019	83,127	60,004		
Miscellaneous	43,782	58,167	44,878	59,103	54,540	55,008	46,851	43,644
Totals	1,410,326	1,384,171	1,429,414	1,390,613	1,404,986	1,376,508	1,313,678	1,259,851

a The electric and other light plants in villages in 1900 aggregated $62,806, as follows: Acton, $9,000; Alexandria, $7,000; Beeton, $6,000; Campbellford, $18,500; Dundalk, $6,500; East Toronto, $3,456; Markham, $4,100; Port Colborne (gas), $250; Tilbury, $1,000; Weston, $7,000.

b Including Acton, $599; Ayr, $257; Beaverton, $1,170; Blyth, $476; Casselman, $164; East Toronto, $6 756; Lucknow, $4,076; Norwich, $2,558; Sundridge, $664; Tilbury, $218.

* Omitting $1,498 transferred to Statement for towns, which in 1898 were villages.

† Omitting $6,100, transferred to Statement for towns.

‡ Omitting $131,145 from aggregate of debenture liabilities transferred to Statement for towns, which in 1898 were villages.

§ Omitting $12,488 transferred to Statement for towns, which in 1898 were villages, viz.: Dunnville, Hespeler, Huntsville, Kingsville and Preston.

FINANCIAL STATEMENT—TOWN MUNICIPALITIES.

Summary showing the totals for all towns in Ontario of the several items of receipts, disbursements, assets and liabilities, for the eight years ending December 31st, 1893–1900.

Schedule.	1900.	1899.	1898.	1897.	1896.	1895.	1894	1893.
RECEIPTS.	$	$	$	$	$	$	$	$
Balance from previous year	297,876	*207,975	199,704	257,955	244,963	165,782	149,398	158,867
Municipal and school taxes	2,208,031	2,160,904	2,098,141	2,037,088	1,964 716	1,971,028	1,932,387	1,840,603
Licenses (liquor and other)	94,073	105,812	104 097	107,539	108,545	111,522	176,600	183,645
Fees, rents, fines, etc	65,994	63,589	58,454	58,265	58,202	57,380		
Water rates, electric light rates, etc	344,248	289,547	223,691	195,797	164,725	152,224	119,172	99,670
Refunds of loans and special deposits	156,865	173,861	219,676	299,175	155,291	190,884	242,012	268,126
Interest and dividends	60,936	58,175	41,171	47,849	40,911	37,591		
Loans for current expenses	2,619,547	2,022 578	1,795,762	1,739,618	1,682,395	1,407,460	1,789,250	1,562,564
Money borrowed on debentures for { Schools	57,4 6	58,658	8 000	34,095	60,400	62,238	69,700	131.000
Money borrowed on debentures for { Other purposes	1,232,855	1,346 890	937,057	798,131	747,861	771,320	679,314	1,049,259
Premium on debentures sold	11,444	47,598	26,226	31,748	39,933	31,784		
County grants	966	2,099	2,425	2,022	6,307	7,289	73,522	69,181
Miscellaneous	80 970	65,789	68,512	68,546	37,683	53,872		
Totals	7,231,301	6,603,300	5,782,916	5,677,826	5,311,936	5,020,372	5,231,355	5,362,915
DISBURSEMENTS.								
Expenses of municipal government :								
Allowances, salaries, commissions	125,105	125,711	120.053	122.203	120,538	121,207	119,792	127,903
Lighting of streets, water supply and fire protection	468,837	424,988	356,813	328,954	316,256	315,437	298,594	278,379
Law costs (including salaries)	38,321	33,926	38,676	25,119	22,142	40,561	108,788	122,665
Other expenses of government	96,121	98,151	86,945	87,663	79,622	81,338		
Construction works :								
Streets, bridges and parks	677,624	552,482	379,064	325,302	351,668	304,857	333,226	376,989
Buildings and other works	31,576	45,540	60.345	73,335	65,524	45,262	292,537	366,317
Waterworks and electric light plant	659,007	544,162	416,581	421,279	384,868	316,920		
Support of the poor and other charities	42,348	34,825	35,636	35,371	31,234	33,908	30,664	32,747
Administration of justice, police service	82,483	78,243	81,321	79,423	75,784	67,279	66,251	62,418
County treasurer for levy	91,554	88,208	90,010	90,909	97,181	94,719	89 660	89,240
Payments for schools and education	702,112	702,885	643,876	643,347	667,449	633,938	656,246	689,271
Sinking fund investments and deposits	135,448	173,850	140,806	259,056	160,452	145,393	246,378	272,987
Other investments and special deposits	192,703	129,388	116,251	61,315	91,986	82,345		

Debentures redeemed	School	47,518	46,219	45,959	58,527	71,378	44,082	358,691	453,632
	All other	367,426	543,988	408,119	518,822	229,187	314,543		
Interest on loans and debentures		546,531	479,282	580,747	480,879	486,891	502,835	456,954	451,258
Money borrowed for current expenses		2,279,029	1,967,075	1,756,682	1,631,743	1,664,174	1,481,901	1,810,483	1,745,922
Board of Health		29,300	16,932	12,799	13,966	10,626	12,863	197,299	143,789
Miscellaneous		297,733	220,041	187,023	220,970	127,018	137,376		
Totals		6,916,776	6,305,421	5,557,690	5,478,122	5,053,981	4,775,814	5,065,573	5,213,517
Assets.									
Cash in treasury		320,525	297,876	225,226	199,704	257,955	244,558	165,782	149,398
Taxes in arrears		683,365	734,213	833,921	882,748	885,956	864,006	856,825	792,949
Sinking fund investments and deposits		795,255	*707,923	801,859	806,668	793,170	693,494	1,266,082	1,263,985
Other investments and special deposits		739,368	680,501	619,971	586,228	618,862	625,479		
Waterworks and electric light plant		*a* 4,403,418	3,877,317	3,504,764	3,159,171	2,890,983	2,644,937	5,092,767	4,943,759
Other buildings and property		3,003,493	2,905,089	3,087,487	2,983,178	2,950,183	2,986,528		
Miscellaneous		1,884,386	1,530,727	1,195,370	1,237,538	1,127,298	458,153	573,210	426,879
Totals		11,829,810	10,733,646	10,268,598	9,855,235	9,524,407	8,517,155	7,954,666	7,576,970
Liabilities.									
County levy		37,959	37,391	32,219	33,571	34,242	40,176	36 742	41,261
Local school rates		196,068	172,296	197,723	187,261	193,869	185,911	176,931	165,324
Debentures outstanding for	Aid to railways	528,270	497,997	507,484	603,594	607,165	652,143	722,628	851,866
	Schools	815 272	831,404	857,365	895,224	1,023,429	1,031,407	1,025,020	974,874
	Other purposes	10,316,991	* 9,485,768	8,979,891	8,351,797	7,967,529	7,403,818	6,863,404	6,392,549
Due Sinking Funds		*b* 96 028	83,619	85,152	94,551	120,617	87,791	735,877	765,267
Loans for current expenses and interest		1,100,261	*769,625	709,040	661,542	575,526	572,187		
Miscellaneous		199,474	174,551	144,203	267,460	213,585	142,672	170,903	174,088
Totals		13,320,326	12,052,651	11,513,017	11,095,000	10,735,902	10,119,105	9,731,505	9,371,229

* The Financial returns for 1899 from Dunnville, Hespeler, Huntsville, Kingsville and Preston recently incorporated as towns, are included above, but in 1898 and previously were included in tabulation for villages,—and Woodstock now tabulated as a city was formerly included with towns. These changes account for the following differences between balances reported at close of 1898 and the balances reported above, namely : a decrease of $17,251 in balance from previous year,—a decrease of $151,086 in Sinking Funds (*assets*), a decrease of $243,098 in all debentures (Liabilities)—and an increase of $3,621 in Temporary Loans (Liabilities).

a The electric and other light plants in *towns* in 1900, aggregated $716,197, as follows : Amherstburg, $3,509 ; Barrie, $39,672 ; Bracebridge, $14,010 ; Bothwell, $6,600; Brockville, $100,000 ; Collingwood, $30,173 ; Fort William, $16,270 ; Goderich, $26,902 ; Hespeler, $11,554 ; Huntsville, $8,274 ; Kincardine, $13,528 ; Kingsville, (natural gas) $30,000 ; Leamington (natural gas) $20,000 ; Mitchell, $9,000 ; Newmarket, $11,500 ; Niagara, $17,560 ; Niagara Falls, $76,626 ; North Toronto, $565 ; Orillia, $32,000 ; Picton, $23,547 ; Port Arthur, $127,182 ; Prescott, $15,618 ; St. Marys, $5,262 ; Sudbury, $20,713 ; Toronto Junction, $24,000 ; Trenton, $15,000 ; (North Toronto in addition to the foregoing, has an electric light plant estimated at $10,000, in connection with its waterworks plant)

b Including Fort William, $26,620 ; Kincardine, $2,555 ; Listowell, $1,677 ; Oakville, $3,029 ; Owen Sound, $9,296 ; Peterborough, $31,491 ; Port Arthur, $22,076 ; Seaforth, $3,100 ; Uxbridge, $1,297 : Walkerton, $887.

FINANCIAL STATEMENT—CITY MUNICIPALITIES.

Summary statement showing the totals for the thirteen Cities of the Province of Ontario of the several items of Receipts, Disbursements, Assets and Liabilities for the ten years ending December 31st, 1891-1900.

Schedule.	1900.	1899.	1898.	1897.	1896.	1895.	1894.	1893.	1892.	1891.
RECEIPTS.	$	$	$	$	$	$	$	$	$	$
Balance from previous year	526,712	833,413	589,891	715,390	543,686	378,541	395,266	579,254	559,010	368,901
Ordinary municipal revenue:										
Municipal and school taxes	5,600,710	5,280,927	5,078,809	4,966,002	5,088,215	5,164,106	5,1 5,418	5,172,759	4,717,113	4,737,229
Liquor licenses	93,147	95,795	91,275	95,449	92,222	93,893	99,185	102,336	99,669	100,593
Other licenses	50,418	50,360	47,214	41,754	39,186	41,637	42,369	42,809	45,597	50,055
Fees, rents, tolls, fines, etc	472,885	434,335	408,888	391,691	410,458	376,122	375,111	374,736	363,044	292,900
Water rates, electric light, gas rates, etc	980,039	1,092,419	1,040,392	1,028,673	1,008,129	983,534	986,249	885,333	802,571	886,139
Interest on bank deposits, sinking fund and other investments and dividends	381,481	369,007	354,162	309,612	285,883	248,532	244,439	192,110	211,515	168,686
Subsidies and refunds:										
Government (except loans and schools)	16,228	19,162	17,053	18,638	20,388	20,641	16,185	24,419	22,332	18,498
Moneys loaned or invested (including sinking funds and special deposits)	984,291	2,260,598	1,599,386	1,662,182	916,784	444,724	512,083	292,122	26,481	294,746
Loans:										
Money borrowed for current expenses	2,968,425	2,376,181	2,215,732	1,849,188	1,377,426	1,901,123	2,214,476	2,874,212	2,654,513	3,961,752
Money borrowed on debentures—										
For school purposes	† 50,500	* 10,000	233,046	50,000	135,500	213,500	67,000	15,000	380,522	138,745
For all other purposes	1,366,738	2,230,022	2,769,823	2,462,888	2,892,152	2,692,179	4,413,452	2 771,880	2,788,956	3,604,225
Miscellaneous	‖174,930	‡228,601	335,039	299,766	336,975	235,511	187,974	395,797	721,667	1,683,081
Totals	13,666,504	15,280,820	14,780,710	13,891,233	13,146,999	12,794,043	14,669,207	13,722,767	13,423,011	16,305,550
DISBURSEMENTS.										
Expenses of municipal government:										
Allowance, salaries and commissions	225,453	234,906	188,219	192,948	199,288	174,900	153,305	159,147	154,754	154,844
Printing, advertising, postage, stationery	37,267	33,818	37,406	35,998	31,316	36,151	32,343	37,982	31,457	37,685
Insurance, heating, lighting buildings	57,789	55,795	46,892	46,074	30,175	88,265	50,723	53,542	47,827	72,148
Law costs (including salaries)	54,872	48,563	54,270	65,056	62,468	57,597	69,380	66,846	55,780	35,312
Lighting of streets	255,806	239,666	251,379	245,456	254,797	282,986	278,626	275,618	265,313	270,337
Water supply and fire protection	839,166	736,012	828,061	720,294	716,095	727,622	750,721	685,179	586,951	633,455
Election of members of council	11,651	9,865	12,743	10,057	13,298	10,121	17,483	10,750	10,556	8,188
Other expenses of municipal government	125,152	98,912	89,402	68,128	111,696	71,708	64,691	81,377	59,840	61,889
Construction works:										
Streets, bridges and parks	1,884,182	1,618,975	1,261,798	1,398,771	830,892	1,254,390	1,201,237	1,672,647	1,846,859	1,782,703
Waterworks, sewers and electric light	644,059	561,181	334,439	373,916	354,112	491,655	404,513	277,326	316,074	798,903
Buildings and other property	197,132	376,477	467,118	555,481	527,074	243,383	439,197	639,460	281,267	182,681

S. B. I. (III)

Board of Health (including salaries)	71,332	72,770	67,205	68,145	63,648	59,116	78,510	70,434	77,810	114,831
Support of the poor and other charities	199,077	183,319	175,233	175,327	157,318	147,994	150,597	137,472	143,322	143,238
Administration of justice, police service, etc.	560,397	550,702	526,198	508,054	508,610	547,628	516 568	510,034	516,583	535,662
Payment on schools and education	1,450,853	1,130,466	1,258,986	1,068,928	1,141,815	1,134 140	1,014,689	1,068,058	979,176	1,062,372
Investments and deposits:										
Sinking fund investments and deposits	956,990	2,363 835	2,154,395	2,079,598	1,543,124	1,233,643	913,362	989,008	820,781	597,111
Other investments and special deposits	423,302	250,104	157,870	122,431	252,250	22,517	136,564	126,404	40,467	28,972
Loans and Interest:										
Debentures redeemed { Principal	1,421,313	1,191,529	2,312 718	2 176,917	2,009,335	1,236,919	3,196,946	2,354,186	456,150	664,236
Debentures redeemed { Interest	1,675,963	1,622,380	1,593,108	1,632,664	1,625,955	1,590,748	1,593,715	1,566,840	1,521,264	1,395,958
Interest or discount on loans, etc.	122,179	115,814	107,346	99,369	92,125	91,228	101,462	86,847	116,550	252,590
Moneys borrowed for current expenses	1,911,685	2,990,049	1,705,883	1,250,683	1,336,975	2,332,320	2,691,141	2,065,501	4,004 716	4,900,248
Discount on debentures sold	6,856	9,283	5,010	3,625	30,219	36 010	107,758	41,888	148,393	107,291
Library	57,025	56,576	55,775	57,666	57,047	51,631	291,837	350,952	361,897	1,905,456
Miscellaneous	271,297	200,111	245,592	345,756	482,546	363,385				
Totals	13,440,598	14,754,108	13,966,046	13,301,342	12,432,208	12,260,357	14,290,666	13.327,501	12,843,757	15,746,510
ASSETS.										
Cash in treasury (exclusive of sinking funds)	225,906	526,712	834,664	589,891	714,791	543,686	378,541	395,266	579,254	559,040
Taxes in arrears	2,172,564	2,087,251	2,194,723	2,205 219	1,992,178	1,975,909	1,818,788	1,732,209	1,555,491	1,395,387
Sinking Fund investments and deposits	8,729 769	8,560,436	8,072,637	7,381,842	6,831,025	6,277,778	6,963,222	6,425,681	5,619,138	4,785,238
Other investments (incl. special deposits)	1,915,869	1,800,206	1,777,478	1,785,394	1,833,607	1,496,880				
Land, buildings, etc.	13,184,319	12,997,730	12,699,496	12,447,827	12,370,784	12,272,758	11,917,357	11,372,880	10 274,362	9,558,207
Waterworks	11,257,342	10,923,162	10,518,642	10 481,486	10,421,768	10,398,892	10,107 966	9,439,334	9,126,394	8,921,883
Other property (cemetery, fire halls, etc.)	1,539,274	1,547,122	1,508,685	1,461,036	1,389,534	1,4 7,563	1,313,667	1,194,684	1,149,700	1,110,162
Miscellaneous	3,948,867	3,956,453	3,902,440	3,673,267	4,016,053	3,738,741	4,017,423	4,941,034	5,455,789	5,063,179
Totals	42,973,910	42,369,072	41,518,765	40,025,962	39,569,740	38,142,207	36,516,934	35,501,088	33,760,128	31,423,096
LIABILITIES.										
Local school rates unpaid	30,543	12,125	24,129	9,368	16,562	25,988	27,194	34,185	76,582	61,343
Debentures outstanding (principal):										
Aid to railways	2,356,533	2 399,202	2,431,057	2,443,600	2,492,981	2,165,327	2,161,751	2,212,386	2,282,075	2,279,220
Schools	2,599,438	2,596,676	2,657,843	2,410,542	2,392,624	2,303,921	2,146,665	2 081,874	2,119,322	1,767,801
Local improvements	8,695,233	9,499,774	9,748,620	9,663,424	10,308,596	10,606,307	10,779,224	10,041,508	9,605,061	8,057,144
Municipal works	8,405,562	8,327,975	7,487,622	7,807,042	7,676,351	7,234,656	12,716,592	14,468,464	13,878,693	13,192,235
All other objects	17,065,483	17,202 637	16,281,386	15,521,769	14,600,678	14 142,703	6,970,919	4,594,831	5,081,220	4,956,643
Loans for current expenses and interest	2,693,978	1,607,923	2,212 098	1,709,406	1,110,364	1,069,123	1,505,226	1,960,411	1,132,918	2,515,938
Miscellaneous	1,641,886	1,594,357	1,602,554	1,607,280	1,919,232	1,596,634	1,898,733	1,511,872	2,048,120	1,863,449
Totals	44,388,596	43,240,669	42,345,309	41,172,431	40,517,388	39,144,959	38,209,307	36,905,531	36,224,321	34,693,773

† Guelph, $2,000; Hamilton, $36,000; Ottawa, $12,500. * Ottawa, $10,000.

‖ Including premiums on debentures sold, as follows: Belleville, $1,,029; St. Thomas, $304; Stratford, $158; Woodstock, $121.

‡ Including $2,815 for premiums on debentures sold, as follows: Chatham, $1,715; Kingston, $84; St. Thomas, $1,016.

◂ Including $42,000 for electric light plant, as follows; Chatham, $17,000; and Windsor, $25,000; and for street lamps, St. Thomas, $2,000.

FINANCIAL STATEMENT—COUNTY MUNICIPALITIES.

Summary statement showing for all County Municipalities of Ontario the aggregate totals of the several items of Receipts, Disbursements, Assets and Liabilities for the ten years ending December 31st, 1891-1900

Schedule.	1900.	1899.	1898.	1897.	1896.	1895.	1894.	1893.	1892.	1891.
RECEIPTS.	$	$	$	$	$	$	$	$	$	$
Balance from previous year	220,596	179,638	227,866	222,663	221,381	224,203	262,914	347,192	303,802	298,066
Ordinary municipal revenue:										
Rates from local municipalities	1,099,357	1,110,356	1,047,924	1,097,689	1,111,043	1,243,999	1,258,060	1,231,039	1,372,862	1,303,572
Licenses	15,206	14,971	14,227	12,378	12,357	12,573	13,097	14,013	12,843	12,602
Fees, rents, tolls, fines, etc	12,305	11,666	11,573	12,454	24,939	25,557	24,966	29,539	33,394	35,100
Surplus fees from registrar	16,131	11,716	10,957	13,292	16,951	13,626	13,351	16,365	19,636	20,270
Interest on deposits and dividends on investments	13,241	12,469	17,475	16,101	34,058	30,501	33,063	31,215	33,638	49,433
Loans:										
Money borrowed for current expenses	472,430	437,272	557,227	672,967	742,454	581,717	752,801	697,950	627,984	640,987
Money borrowed on debentures	77,491	92,638	119,863	117,516	200,419	65,300	301,666	158,323	27,900	248,470
Non-resident taxes collected	42,540	55,524	73,120	81,235	71,176	99,044	89,459	95,026	103,997	107,513
Towns or cities separated from county for various services	89,910	81,535	79,175	97,267	107,562	95,797	102,615	96,147	98,139	94,891
Subsidies and Refunds:										
Refund of moneys loaned or invested	68,399	55,406	95,195	35,530	422,348	226,492	381,353	216,612	207,475	459,897
Received from Government:										
For schools	142,954	149,361	147,418	149,606	142,717	144,095	142,180	139,714	140,461	143,050
For administration of justice	138,685	133,845	146,726	171,541	148,916	161,820	141,868	122,261	120,658	144,545
For other purposes, except loans	372	18,520	128	8,144	12,167	194	4,464	209	4,141	29,339
Miscellaneous	62,914	49,841	59,791	97,506	85,166	28,232	48,469	111,718	37,838	40,484
Totals	2,472,531	2,414,758	2,608,665	2,805,889	3,353,654	2,953,150	3,570,260	3,307,323	3,144,768	3,628,219
DISBURSEMENTS.										
Expenses of municipal government.										
Attendance at meetings of council and committees	39,616	44,548	38,931	43,443	72,772	62,740	67,512	67,100	63,959	67,920
Allowances, salaries and commissions	78,454	77,054	71,617	74,508	75,669	77,113	77,472	82,234	84,771	89,555
Printing, advertising, postage and stationery	22,713	22,583	24,876	26,548	25,650	22,664	22,113	22,921	21,593	22 726
Insurance, heating, lighting and care of buildings	37,960	37,274	33,628	32,448	38,335	31,395	37,389	43,257	37,939	30,972
Law costs (including salaries)	6,673	6,644	7,807	6,453	19,058	11,489	28,334	17,209	11,181	11,464
Other expenses	19,267	19,714	19,825	22,744	11,816	15,360	16,393	17,187	18,394	20,654

Construction works:											
Roads and bridges	139,281	144,762	136,491	125,909	107,621	109,030	195,095	217,302	194,941	235,411	
Grants to local municipalities for roads and bridges	23,829	20,620	18,252	26,244	39,621	39,621	63,808				
Buildings and other works	78,813	78,667	140,330	24,211	76,963	58,912	29,963	70,487	75,614	80,556	
Support of the poor and other charities	103,862	102,511	87,495	88,782	80,486	66,856	70,548	60,425	61,182	61,794	
Administration of justice, gaol maintenance, etc	433,768	434,721	447,054	468,832	461,634	485,032	455,714	420,373	436,197	423,350	
Grants to schools and other payments for education	362,375	363,919	361,215	360,176	410,249	490,081	475,245	477,940	467,893	452,795	
Sinking fund investments and deposits	69,373	46,941	39,452	52,525	126,417	182,622	229,430	260,527	123,814	174,607	
Other investments and special deposits	43,015	31,000	25,000	37,321	32,798	10,000					
Loans and interest:											
Debentures redeemed:											
Principal	131,188	103,706	141,914	163,391	546,900	137,209	382,894	360,548	243,595	645,834	
Interest	89,500	72,022	91,914	88,379	116,423	119,928	133,768	143,712	151,618	179,572	
Interest or discounts on loans, advances, etc	13,422	15,390	16,911	18,676	21,651	21,266	22,321	18,439	18,033	16,366	
Refund of money borrowed for current expenses	491,778	444,459	613,537	704,425	735,743	638,216	832,107	626,091	619,997	644,578	
Non-resident taxes paid local municipalities	42,272	70,386	66,343	83,313	75,288	112,915	94,583	95,820	112,247	98,056	
Miscellaneous	52,377	57,211	46,432	129,695	55,897	39,320	111,368	52,837	54,608	68,207	
Totals	2,279,536	2,194,162	2,429,027	2,578,023	3,130,991	2,731,769	3,346,057	3,044,409	2,797,576	3,324,417	
ASSETS.											
Cash in treasury	192,995	220,596	179,638	227,866	222,663	221,381	224,203	262,914	347,192	303,802	
Rates due from local municipalities	489,635	533,868	531,222	550,055	587,538	603,043	668,960	654,171	550,787	609,513	
Sinking Fund investments and deposits	257,895	234,921	212,386	220,010	181,015	449,946	520,216	672,739	628,824	712,465	
Other investments and special deposits	47,115	34,400	34,400	57,519	42,198	36,400					
Land, buildings, furniture, etc	3,267,078	3,228,327	3,229,542	3,143,600	3,179,066	3,140,808	3,106,264	3,008,195	3,046,160	2,973,377	
Miscellaneous	142,918	128,168	151,806	156,851	153,955	187,401	191,831	326,994	346,897	315,535	
Totals	4,397,636	4,380,280	4,338,994	4,355,901	4,366,435	4,698,979	4,711,474	4,925,013	4,918,860	4,914,692	
LIABILITIES.											
School grants unpaid	7,657	11,585	11,524	10,903	12,642	36,585	35,954	40,249	48,669	34,058	
Debentures outstanding (principal for):											
Aid to railways	258,500	305,000	322,000	419,712	408,233	548,848	740,474	783,747	927,925	1,023,718	
Schools					1,036	2,023	2,963	3,898	4,710	5,562	
All other objects	1,459,491	1,466,688	1,459,056	1,383,395	1,439,713	1,633,392	1,616,735	1,551,947	1,599,180	1,718,231	
Loans for current expenses and interest due on same	*300,807	†320,585	327,025	387,249	425,383	404,252	459,674	538,982	467,123	459,477	
Local municipalities for non-resident taxes collected	11,295	11,027	25,889	19,112	21,540	30,070	18,518	19,717	20,510	28,840	
Miscellaneous	66,342	89,429	68,664	88,700	60,142	54,150	69,199	73,278	91,750	83,993	
Totals	2,104,092	2,204,314	2,214,158	2,309,071	2,368,689	2,709,320	2,843,517	3,011,818	3,159,867	3,353,879	

* Including $25,493 due Sinking Funds, as follows: Hastings, $8,446; Huron, $8,856; Peterborough, $8,191.

† Including $18,244 due Sinking Funds, as follows: Hastings, $5,000; Huron, $4,096 Northumberland and Durham, $2,000; Peterborough, $7,148.

FINANCIAL STATEMENT CITY MUNICIPALITIES—1899.

Showing an abstract statement of Receipts, Disbursements, Assets and Liabilities of the cities of Ontario for the year ending December 31, 1899

Schedule.	Belleville.	Brantford.	Chatham.	Guelph.	Hamilton.	Kingston.	London.	Ottawa.	St. Catharines.	St. Thomas.	Stratford.	Toronto.	Windsor.	Woodstock.
RECEIPTS.	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Balance from 1898	7,623	5,426	5,167	6,040	4,248	16,679	46,076	.....	2,335	14,132	47	706,043	848	18 719
Municipal and school taxes	78,375	132,116	95,704	96,483	538,330	151,056	404,118	538,194	102,892	111,194	98,407	2,723,792	147,697	62,569
Liquor licenses	2,769	2,647	3,977	2,566	10,444	7,299	3,080	17 085	2,384	3,065	2,464	31.530	4,286	2,199
Other licenses	1,015	1,793	647	572	4,092	1,206	2,541	2,460	924	5 6	482	32,676	635	771
Fees, rents, tolls, fines, etc	2,903	4,271	2,333	2,818	38,101	4,491	21,033	26,465	4,850	784	985	319,071	2,968	3,262
Water rates, electric light, etc	4,879	29,845	10,123	14,211	177,091	30,636	86 847	182,389	26 864	17,804	....	461,797	*32,800	17,153
Interest and dividends	2,390	10,207	1,827	10,473	8,493	4,125	19,176	95,355	3,815	3,123	4,033	190,047	9,130	6,813
From Government (except for loans and schools)	.....	.....	.....	200	9,247	388	350	.....	57	.....	.....	8,720	200	.....
Refund of moneys loaned	3,500	4,826	.....	.....	15,965	710	104,558	151,414	26,304	1,000	45,808	1,863,321	41 898	1,294
Loans:														
Borrowed for current expenses	282,353	34.721	90,669	.....	145,067	50,000	331.170	720,702	42,700	199,642	82.000	289,789	81.747	25.621
Borrowed on debentures	.....	53,271	49,091	8,993	63,009	33,490	73,622	301,023	15,254	38,773	14,801	1,583,144	.....	5,551
Cemetery	.....	1,722	792	.....	5.567	.....	.....	..	934	..	1,223	.....	....	....
Miscellaneous	8,248	2,916	4,035	89	19,397	9,036	23,861	35,241	1,496	2,624	1,906	107 822	1,310	379
Totals	394,085	283,761	264,365	142,445	1,039,651	309,096	1,116,432	2,070,331	230,809	392,657	252,156	8,317,752	322,919	144,361
DISBURSEMENTS.														
Expenses of municipal government:														
Election of members of Council	165	645	166	189	561	313	819	773	218	159	178	5,026	447	206
Salaries and commissions	3,851	6,316	4,032	3,215	28,141	9,817	17,706	29,025	4,511	6,012	4,402	109,813	5,113	2,952
Printing, advertising, postage, stationery	2,299	1,261	578	584	2,868	1,370	3,976	5,595	822	953	972	11,485	1,008	547
Insurance, heating, lighting and care of buildings	567	1,542	387	2,010	3,632	2,472	4,001	7 419	1,235	930	456	29,529	586	999
Law costs (including salaries)	700	369	2,266	300	4,320	1,163	2,065	5,833	806	..	854	28,224	554	1,009
Lighting of streets	6,639	8,138	3,996	5,850	33,524	8,001	25,289	27,575	7.705	6,734	5,038	90,400	6,961	3,816
Water supply and fire protection	16,508	35,191	12,836	11,373	38,277	19,787	51,899	84,836	21,252	17,366	8,187	378,418	24,995	15,087
Other expenses of municipal government	3,127	3,052	1,107	91	16,853	2,348	18,291	3,883	2,254	4,674	161	40,091	1,429	1,551
Construction works.														
Streets, bridges and parks	13,854	16,693	27,677	11,067	109,406	22,693	88,229	179,682	18,003	59,302	8,927	1,041,652	14,731	7,059
Waterworks, sewers and electric light plant	181,848	13,666	2,737	2 012	48,484	12,780	71,301	127,743	4,731	3,360	20.348	57,903	6,438	7,830
Buildings and other property	.....	†35,643	.....	160	50,000	....	41,688	..	.....	19,484	16,580	201,933	...	‡7,989
Board of Health (including salaries)	79	600	926	1,059	9,734	731	2 519	11,480	796	482	653	41,274	2,101	336
Support of charities	1,927	5,926	2,251	3,460	13,826	3,038	19,625	1,835	1,877	3,787	3,989	88,368	2,835	525

Administration of justice, police, service	5,476	7,300	6,666	7,442	67,139	14,776	47,688	50,002	5,693	4,285	4,155	319,564	7,764	2,752
Schools and education	17,371	30,554	19,918	24,099	126 271	36,911	107,374	147,516	23,358	32,378	20,750	498,975	29,048	15,943
Sinking F'd investments and deposits	7,030	26,764	.....	19,088	52,560	6,019	143,713	301,023	22,599	4,945	25,514	1,706,351	32,608	§ 15 621
Other investments and deposits	6,463	31,040	.....	.....	3,279	111	33,349	.....	2,974	.....	2,405	167,859	2 335	289
Loans and interest:														
Debentures { Principal	.....	2,887	18,259	750	52,364	24,989	192	12,597	531	28,948	8,000	982,621	55,609	6,779
redeemed. { Interest	21,168	40,424	25,575	26,792	117,278	41,273	105,853	208,508	37,698	29,078	21,200	854,885	42,459	20,189
Interest or discount on loans, etc	8,329	1,221	5,510	538	4,952	2,867	3,395	22,729	1,884	1,795	2,945	56,459	3,125	65
Discount on debentures sold	.....	.....	.....	.....	.....	.....	611	.....	.....	.....	.....	8,672	.....	.....
Refund of moneys borrowed for current expenses	65,000	.....	120,737	4,000	123,515	53,665	307,245	806,131	61,309	149,500	86,000	1,126,388	76,556	10,000
Cemetery	.....	1,291	1,273	.....	6,182	.....	.....	.....	1,366	.....	2,075	.....	.....	.....
Library	100	2,400	1,346	1,708	9,340	.....	7,852	.....	1,710	800	800	27,902	2,618	.....
Miscellaneous	* 25,524	5,700	2,518	2,362	53,079	2,035	10,828	35,516	5,582	2,950	7,309	26,522	3,512	*a* 4,487
Totals	388,025	278,623	260,861	128,179	1,035,085	267,159	1,115,508	2,069,764	228,917	377,922	251,898	7,903,314	322,832	126,031
ASSETS.														
Cash in treasury (exclusive of sinking fund)	6,060	5,138	3,504	14,266	4,566	41,937	924	577	1,892	14,735	258	414,438	87	18,330
Taxes in arrears	81,625	3,810	29,116	12,808	363,462	48,646	45,536	532 638	34,685	25,053	27,100	821,668	50,562	10,542
Sinking fund investments and deposits	36,602	164,658	.....	150,437	237,726	33,421	325,604	1,406,974	22,054	89,155	65,616	5,651,452	216,567	160,170
Other investments (including special deposits)	28,163	159,937	1,103	193,490	115,579	*b* 22,011	*c* 1,039,856	37,922	173,215	.....	14,963	.....	2 335	11,632
Land, buildings, library, etc.	124,995	264,726	153,000	115,870	877,725	239,849	516,546	508,975	115,266	93,312	72,372	9,798,185	58,150	58 760
Waterworks	180,725	263,768	175,000	146,948	1,752,709	342,489	786,164	2,000,000	358,967	150 000	.....	4,349,385	250,000	167,007
Other property (cemetery, fire halls, etc.)	.....	28,163	*d* 38,500	12,000	*e* 814,193	30,504	14,710	140,000	45,730	*f* 16,700	21,000	299,773	*g* 43,500	9,309
Miscellaneous	52,214	162,941	103,819	58,310	190,034	7,809	70,609	660,225	132,894	231,826	4,978	2,118,790	154,530	7,474
Totals	510,384	1,053,140	504,042	704,129	4,355,994	766,666	2,799,989	5,287,311	884,703	620,781	209,287	23,453,691	775,721	443,224
LIABILITIES.														
Local school rates unpaid	.....	.....	.....	512	.....	.....	2,336	3,630	572	.....	.....	.....	.....	5,075
Debentures outstanding (principal):														
Aid to railways	.....	50,000	.....	193,000	250,000	105,397	325,000	145,000	119,627	7,460	60,000	1,143,718	.....	.....
Schools	8,500	72,656	.....	15,700	242,389	66,800	86,300	257,000	.....	50,166	20,500	1,616,369	99,771	60,525
Local improvement	17,664	172,609	133,646	84,910	38,833	133,729	301,871	611,599	25,656	181,558	60,428	7,387,345	297,810	52,176
Municipal works	.....	255,000	176,374	67,900	950,000	273,800	830,629	1,474 584	30,000	128,373	.....	3,876,279	123,247	143,789
All other objects	421,000	426,433	292,783	248,550	2,103,214	404,300	1,310,681	2,101,885	707,733	203,037	318,500	*h* 8,180,285	259,711	218,625
Loans for current expenses	282,353	*i* 65,618	78,419	16,000	145,067	30,000	41,170	462,508	24,400	62,855	32,031	289,789	53,225	21,488
Miscellaneous	.....	190	3,202	9,283	12,247	22,914	73,361	*j* 187,066	7,915	16,979	2,590	1,253,440	1,937	3 203
Totals	729,517	1,042,406	684,424	635,855	3,741,750	1,036,940	2,971,348	5,243,272	915,933	656,428	494,059	23,747,225	835,731	505,781

* Including $344 from electric light. † Including $83,970 flood prevention expenses. ‡ Including $3,000 for gravel pit. § In city account. ‖ Contractors' and other special deposits refunded. ¶ Including $20,550 bonus to rolling mill. *a* Including $4,480 to county. *b* Stock in hospital per prior returns, $1,900; water works balance, 1899, $111; total, $2,011. *c* Including water works contract deposit, $10,023; cash balance, $8,348; total, $18,371. *d* Including $17,000 for light plant. *e* Including $748,045 for sewage disposal system. *f* Including $2,000, light plant. *g* Including $25,600 for light plant. *h* Including short dated debentures secured by taxes in arrears, $400,000. *i* Including $8,721, water works overdraft. *j* Including $145,000 mortgage on city real estate and $37,922 contractors' guarantee deposit.

NOTE. In this statement of assets the school property is not included, although the assets should properly be increased by an amount equivalent to the school debentures outstanding, which are liabilities of the municipality.

FINANCIAL STATEMENT—CITY MUNICIPALITIES—1900.

Showing an abstract statement of Receipts, Disbursements, Assets and Liabilities of the cities of Ontario for the year ending December 31, 1900.

Schedule.	Belleville.	Brantford.	Chatham.	Guelph.	Hamilton.	Kingston.	London.	Ottawa.	St. Catharines.	St. Thomas.	Stratford.	Toronto.	Windsor.	Woodstock.
RECEIPTS.	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Balances from 1899	6,060	5,138	3,504	14,266	4,566	41,937	924	577	1,892	14,735	258	414,438	87	18,330
Municipal and school taxes	89,525	134,261	104,246	98,154	536,072	141,802	423,111	589,680	100,702	132,435	96,752	2,945,505	148,081	60,384
Liquor licenses	2,388	2,825	2,956	2,180	10,183	7,244	2,965	15,407	2,567	3,147	2,487	33,844	2,758	2,196
Other licenses	1,016	1,702	589	562	4,696	1,182	2,608	2,497	1,095	783	638	31,319	1,004	727
Fees, rents, tolls, fines, etc	3,674	4,737	1,635	2,638	37,971	3,737	23,542	28,309	4,387	1,680	1,265	353,374	3,205	2,731
Water rates, electric light, etc	20,881	31,838	10,714	14,791	181,791	29,811	89,350	169,301	23,286	18,463	.....	340,142	*31,948	17,723
Interest on investments and dividends	4,147	10,129	94	10,448	13,634	4,380	24,277	84,924	3,014	4,776	3,757	196,576	8,225	†13,160
From Government (except for loans and schools)	.....	.....	.....	216	7,863	402	1,374	.....	.....	.....	.....	6,157	216	.....
Refund of moneys loaned	6,088	27,298	.....	490	13,489	111	29,233	61,029	28,425	98	24,815	741,295	27,369	24,551
Loans:														
Borrowed for current expenses	‡121,864	24,082	88,791	6,000	186,958	48,995	624,722	49,992	80,658	428,500	76,000	1,101,162	92,201	38,500
Borrowed on debentures	145,951	88,439	.....	6,416	422,275	28,581	164,722	345,854	.....	60,708	16,783	91,700	20,000	25,809
Cemetery	.....	1,161	714	.....	7,994	.....	.....	.....	1,351	.....	988	.....	.....	.....
Miscellaneous	3,238	8,032	3,087	7,310	45,923	5,056	2,932	10,003	24	1,440	3,126	70,449	1,213	889
Totals	404,832	339,642	216,330	163,471	1,473,415	313,238	1,389,760	1,358,573	247,401	666,765	226,869	6,325,961	336,307	204,940
DISBURSEMENTS.														
Expenses of municipal government:														
Election of members of council	123	630	165	216	1,449	467	757	758	747	162	335	5,330	366	146
Salaries and commissions	3,872	6,840	3,698	3,046	29,205	10,028	17,138	23,357	4,672	6,052	4,906	105,586	4,540	2,513
Printing, advertising postage and stationery	715	1,129	485	544	2,502	1,180	5,502	5,852	2,472	867	906	13,685	685	743
Insurance, heating, lighting and care of buildings	1,256	1,159	655	2,059	5,158	2,340	4,349	4,370	1,256	2,674	1,074	30,464	794	181
Law costs (including salaries)	761	279	1,153	300	4,320	1,016	1,739	8,295	921	.....	1,350	33,672	500	366
Lighting of streets	6,342	8,438	4,523	5,850	32,538	8,079	24,262	24,761	7,781	7,859	5,083	109,468	7,008	3,814
Water supply and fire protection	22,527	37,373	12,793	14,268	85,025	18,742	62,257	108,905	22,504	18,323	8,646	386,173	24,404	17,226
Other expenses of municipal government	1,457	1,342	1,093	30	11,797	3,013	7,377	2,264	1,986	3,196	155	88,973	1,912	557
Construction works:														
Streets, bridges and parks	11,454	19,722	46,676	9,806	238,488	20,875	113,569	155,474	42,467	30,651	10,533	1,138,850	31,609	14,008
Waterworks, sewers and electric light plant	2,488	62,358	2,620	764	234,541	17,384	63,423	197,268	1,137	1,763	11,776	42,083	770	5,689
Buildings and other property	80	§30,374	.....	‖13,984	.....	.....	21,721	117	2,088	3,993	12,038	106,475	.....	6,262

Board of Health (including salaries)	143	1,105	1,000	790	11,600	659	2,491	6,695	954	488	754	41,779	2,507	367
Support of charities	2,041	5,628	2,223	3,593	49,661	3,425	27,214	11,139	2,160	4,747	2,441	80,662	3,093	1,050
Administration of justice, police service	5,016	7,725	6,510	8,934	62,232	14,481	43,980	51,090	5,227	4,661	4,478	335,268	8,189	2,606
Schools and education	16,232	33,475	30,399	26,423	155,470	35,150	169,141	129,187	24,325	25,723	22,750	786,512	29,715	16,351
Sinking F'd investments and deposits	¶12,674	30,831	.....	21,108	54,716	6,385	80,016	252,148	11,376	3,259	30,418	412,662	31,156	10,241
Other investments and deposits	36,241	8,075	1,600	.....	93,207	**35,834	121,420	.....	1,680	12,924	138	110,172	1,034	977
Loans and interest:														
Debentures redeemed { Principal	90,000	5,277	18,192	9,750	52,317	38,937	11,053	††3,093	18,193	30,098	1,800	1,064,451	44,751	33,101
Debentures redeemed { Interest	22,088	42,229	25,441	32,323	150,205	43,052	134,765	216,790	40,126	29,010	21,424	853,905	38,797	26,808
Interest or discount on loans, etc	13,990	927	5,234	565	8,812	3,535	4,614	30,569	1,923	3,218	3,077	42,080	3,296	339
Discount on debentures sold	.....	.....	.....	.....	5,731	.....	125	1,000	.....	.....	.....	.....	.....	.....
Refund of moneys borrowed for current expenses	142,863	23,721	51,033	.....	145,067	30,000	511,170	.....	43,200	459,142	73,000	289,789	95,890	46,810
Cemetery	.....	1,328	1,082	.....	9,758	.....	.....	.....	2,525	.....	1,189	.....	.....	.....
Library	200	2,200	1,101	1,750	9,610	.....	8,217	.....	1,636	1,050	800	28,365	2,096	..
Miscellaneous	11,989	6,411	4,286	2,174	15,102	6,025	2,023	‡‡120,722	4,484	2,950	6,984	63,643	3,168	§§5,454
Totals	404,552	338,571	211,962	158,277	1,468,511	300,607	1,378,323	1,353,854	246,140	652,810	226,055	6,170,047	336,280	194,609
ASSETS.														
Cash in treasury (exclusive of sink'g f'd)	280	1,071	4,368	5,194	4,904	12,631	11,437	3,719	1,261	13,955	814	155,914	27	10,331
Taxes in arrears	85,703	3,134	32,666	12,925	338,468	54,682	49,367	573,360	35,227	27,031	30,133	884,919	54,155	11,454
Sinking F'd investments and deposits	49,276	188,231	.....	171,545	281,334	39,806	394,768	1,598,093	27,606	92,316	85,452	5,432,504	222,689	146,149
Other investments (including special deposits)	58,316	‖147,972	2,703	193,000	206,405	57,734	1,142,895	37,922	¶§11,289	12,924	868	487	1,034	12,320
Land, buildings, library, etc	124,995	324,792	149,864	115,982	870,748	239,849	541,546	509,200	115,230	100,044	72,372	9,897,637	58,650	63,410
Waterworks	180,725	317,509	186,917	147,711	1,952,452	344,406	849,819	2,000,000	360,104	150,000	.....	4,349,385	250,000	168,314
Other property (cemetery, fire halls, etc.)	.....	28,163	38,500	9,500	*a*835,034	30,504	14,750	141,000	45,730	*b*15,500	24,000	299,773	*c*43,500	13,320
Miscellaneous	58,150	168,262	151,217	66,737	354,015	28,630	48,813	688,268	115,241	252,052	3,454	1,875,230	124,866	13,962
Totals	557,445	1,179,134	566,235	722,594	4,843,360	807,642	3,053,395	5,531,502	741,658	663,822	217,093	22,895,849	754,921	439,260
LIABILITIES.														
Local school rates unpaid	.....	.....	321	202	.....	.....	156	26,131	.....	.....	.....	.....	.....	3,733
Debentures outstanding (principal):														
Aid to railways	.....	50,000	.....	193,000	250,000	84,860	325,000	145,000	101,134	3,821	60,000	1,143,718	.....	.....
Schools	8,500	72,265	..	17,700	266,105	63,900	86,300	269,100	.. ....	48,543	20,500	1,616,369	98,231	31,925
Local improvement	18,615	181,062	123,494	89,326	62,092	135,610	390,742	685,547	25,636	213,830	67,421	6,351,594	296,106	54,138
Municipal work	.....	305,000	172,224	59,700	950,000	268,500	885,629	1,474,584	30,000	124,651	.....	3,876,279	116,712	142,223
All other objects	476,000	451,433	288,893	247,000	2,426,197	420,800	1,320,479	2,358,598	707,733	216,359	326,500	8,243,285	214,769	237,437
Loans for current expenses	261,149	*d*65,979	115,427	22,000	186,958	48,995	154,722	*e*542,940	61,858	32,000	35,031	1,101,162	49,579	16,178
Miscellaneous	.....	*f*26,107	2,880	4,380	13,291	23,783	67,699	*g*185,643	7,282	12,697	4,726	*h*1,288,602	4,751	45
Totals	764,264	1,151,846	703,239	633,308	4,154,643	1,046,448	3,230,727	5,687,543	933,663	651,901	511,178	23,621,009	810,148	485,679

* Including $123 for electric light. † Including $6,743 arrears, etc., from city *re* S. F. loans applied on redemption of debentures. ‡ Including $11,136 retained in city account from sinking fund. § Including $18,744 flood protection, $6,000 addition to Hospital, $4 750 addition to House of Refuge. ‖ Including $13,872 for Winter Fair building. ¶ Including $11,136 in city account. ** $26,700 debt arrangment debentures, $9,000 smelter site, $131 waterworks account balance. †† Including $2,000 adjustment of error in previous return. ‡‡ Including $99,000 fire relief. §§ Including $4, 291 paid to county. ‖‖ Including $75 waterworks balance. ¶§ Amounts written off: stock, $12,871; railway bonds, $98 131; railway bond interest, $57,812; total, $168 817. *a* Including $768,886 for sewerage system. *b* Including $2,000 for light plant. *c* Including $25,000 for light plant. *d* Including $14,332 waterworks overdraft. *e* Including $80,440 previously omitted. *f* $13,044 unexpended flood money and $11,000 hospital building fund. *g* Being $145,000 on mortgages, $37,922 contractors' deposits, $2,721 special deposits. *h* Including $99,453 Industrial Exhibition loans, $85,000 being mortgages, $14,453 Imperial Bank stock.

ASSESSMENT AND TAXATION.

Summary statement for the Province of Ontario and of the Population and Area, as shown by the assessment rolls, and of the assessed values and amount of Taxes imposed, as shown by the collection rolls, together with the average rate of taxes per head of population assessed as resident, and rate in mills on the dollar of total assessed value for the sixteen years, 1886 to 1901, classified as rural (townships) urban (towns and incorporated villages) and cities.

Municipalities.	Population.	Number of acres assessed	Assessed values.				Taxes imposed for all purposes.		
			Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.	Mills on $
1901.			$	$	$	$	$	$ c.	
Townships..	1,092,181	23,636,178	456,406,064	2,161,826	244,036	458,811,926	4,862,630	4 45	10.6
Towns	330,412	151,053	91,000,970	7,417,856	1,502,551	99,921,377	2,330,691	7 05	23.3
Villages....	126,836	97,424	27,649,258	1,963,130	238,545	29,849 933	589,798	4 65	19.8
Cities	479,460	43,552	221,342,063	18,252,096	7,520,212	247,114,371	5,558,236	11 59	22.5
Total ..	2,028,889	23,928,207	796,398,355	29,793,908	9,505,344	835,697,607	13,341,355	6 58	16.0
1900.									
Townships .	1,095.222	23,568,104	451,535,483	2,422,994	228,576	454,187,053	4,696,255	4 29	10.3
Towns	326,041	153,146	88,341,578	6,971,133	1,503,962	96,816,673	2,180,238	6 69	22.5
Villages....	124,637	97,363	27,004 039	1,854,725	223,519	29,082,283	564,750	4 53	19.4
Cities	467,960	42,027	218,659,680	16,707,100	6,982,881	242,349,661	5,551,578	11 86	22.9
Total ..	2,013,860	23,860,640	785,540,780	27,955.952	8,938,938	822,435,670	12,992,821	6 45	15.8
1899.									
Townships ..	1,109,806	23,445,092	447,964,611	2,779,272	209,065	450,952,948	4,621,803	4 16	10.2
Towns.....	318,145	155,477	86,935,702	6,580,960	1 492,136	95,008,798	2,106,178	6 62	22.2
Villages	133,921	98,976	28,765,080	1,951,675	256,622	30,973,357	585,356	4 37	18.9
Cities	448,876	42,315	214,442,167	18,075,255	7,307,948	239,825,370	5,221,947	11 63	21.8
Total ..	2,010,748	23,741.860	778,107,540	29,387,162	9,265,771	816,760,473	12,535,284	6 23	15.3
1898.									
Townships ..	1,110,894	23,392,584	445,877,275	2,696,084	236,701	448,810,060	4.461,474	4 02	9.9
Towns.....	314,820	156,142	85,576,404	6,421,936	1,531,032	93,529,372	2,095,791	6 66	22.4
Villages ...	134,747	98,346	28,594,694	1,902,735	270,596	30,768,025	570,912	4 24	18.6
Cities	440,889	42,034	211,334,978	16,547,241	8,195,157	236,077,376	5,094,789	11 56	21.6
Total ..	2,001,350	23,689,106	771,383,351	27,567,996	10,233,486	809,184,833	12,222,966	6 11	15.1
1897.									
Townships ..	1,113,530	23,360,428	441,878,264	2,609,661	234,553	444.722,478	4,407,005	3 96	9.9
Towns	312,947	156,338	83,529,399	6,343,065	1,565.482	91,438,546	2,069,444	6 61	22.6
Villages....	133 560	99,240	28,314,870	1,903,926	278,911	30,497,707	569.884	4 27	18.7
Cities	430,940	40,744	212,621,741	17,125,503	7,219,402	236,966,646	5,160,592	11 98	21.8
Total ..	1,990,977	23,656,750	766,341,874	27,982,155	9,298,348	803,625,377	12,206.925	6 13	15.2
1896.									
Townships ..	1,112,900	23,172,408	444,056,842	2.792,097	268,444	447,117,383	4,292.741	3 86	9.6
Towns	306,001	154,520	83,194,842	6,486,590	1,617,776	91,269,208	2,005,132	6 55	22.0
Villages....	132,451	99,507	27,855,878	1.881,680	268,281	30,005,839	557,003	4 21	18.6
Cities	420,934	40,548	221,941,541	16,963 651	7,620,011	246,525,203	5,267,909	12 51	21.4
Total ..	1,972,286	23,466,983	777,049,103	28,094,018	9,774,512	814,917,633	12,122,785	6 15	14.9
1895.									
Townsbips .	1,109,631	23,114,356	445,375,439	2,762,179	279,641	448,417,259	4,473.269	4 03	10.0
Towns	300,655	152,685	84,965,120	6,999,896	1,681,819	93,646,835	2,021,455	6 72	21.5
Villages....	130,889	94,566	27,572,493	1,848,480	290,037	29 711,010	544 111	4 16	15.5
Cities	416,215	40.548	225,079,539	16,852,113	7,759,410	249,691.062	5,277,594	12 68	21.1
Total ..	1,957,390	23,402,155	782,992,591	28,462,668	10,010,907	821,466,166	12,316,429	6 29	15.0

ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.	Population.	Number of acres assessed.	Assessed values.				Taxes imposed for all purposes.		
			Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.	Mills on $
1894.			$	$	$	$	$	$ c.	
Townships..	1,103,828	23,039,610	448,216,984	2,899,503	359,616	451,476,103	4,579,044	4 15	10.1
Towns	297,194	153,164	84,363,681	7,115,395	1,586,389	93,065,465	1,955,980	6 58	21.0
Villages....	126,387	94,407	26,799,930	1,931,015	276,983	29,007,928	526,813	4 17	18.4
Cities	408,810	40,560	227,578,882	17,323,301	7,727,691	252,629,874	5,258,475	12 86	20.8
Total	1,936,219	23,327,741	786,959,477	29,269,214	9,950,679	826,179,370	12,320,312	6 36	14.9
1893.									
Rural	1,096 984	22,959,280	448,311,559	2,957,944	359,600	451,629,103	4,629,028	4 22	10.3
Urban	415,410	246,780	111,724,238	8,923,403	2,029,029	122,676,670	2,449,452	5 90	20.0
Cities	397,665	40,258	226,179,831	17,581,320	7,463,128	251,224,279	5,444,180	13 69	21.7
Total	1,910,059	23,246,318	786,215,628	29,462,667	9,851,757	825,530,052	12,522,660	6 56	15.2
1892.									
Rural	1,102,467	22,885,464	448,566,182	3,089,202	410,274	452,065,658	4,599,442	4 17	10.2
Urban	413 396	228,829	110,989 898	8,452,309	2,469,164	121,911,371	2,375,995	5 75	19.5
Cities	393,664	40,258	222,997,515	18,928,105	9,308,478	261,234,098	4,828,133	12 26	19.2
Total	1,909,527	23,154,551	782,553,595	30,469,616	12,187,916	825,211,127	11,803,570	6 18	14.3
1891.									
Rural	1,116,347	22,825,325	450,559,809	3,101,633	408,892	454,070,364	4,544,291	4 07	10.0
Urban	410,545	227,075	109,462,152	8,570,172	2,343,484	120,375,808	2,305,025	5 61	19.1
Cities	395,229	39,498	216,091,585	19,460,460	8,849,177	244,401,222	4,918,432	12 44	20.1
Total	1,922,121	23,091,898	776,113,546	31,132,295	11,601,553	818,847,394	11,767,748	6 12	14.4
1890.									
Rural	1,118,252	22,676,390	448,916,986	3,178,614	371,488	452,467,088	4,473,108	4 00	9.9
Urban	410,530	223,434	105,353,691	7,878,486	2,170,656	115,402,233	2,161,644	5 27	18.7
Cities	388,762	39,498	202,907,967	19,300,295	8,538,688	230,746,950	4,262,733	10 96	18.5
Total	1,917,544	22,939,322	757,178,044	30,357,395	11,080,832	798,616,271	10,897,485	5 68	13.7
1889									
Rural	1,136,060	22,554,717	447,114,443	*3,470,224	392,553	450,977,220	4,507,717	3 99	10 0
Urban	400,890	215,532	96,567,320	7,773,945	2,112,533	106,453,798	1,993,623	4 97	18.7
Cities	375,951	38,498	177,634,932	18,826,684	8,013.182	204,474,798	3,746,858	9 97	18.3
Total	1,906,901	22,808,747	721,316,695	30,070,853	10,518,268	761,905,816	10,248,198	5 37	13.5
1888.									
Rural	1,133,046	22,348,502	433,596,047	26,624,345	395,430	460,615,822	4,494,780	3 97	9.8
Urban	393,461	211,707	90,416,611	7,956,694	2,039,794	100,413,029	1,884 918	4 79	18 8
Cities	353,638	36,961	160,239.217	19,345,906	8,040,596	187,625,719	3,540,264	10 01	18 9
Total	1,880,145	22,597,170	684,251,875	53,926,945	10,475,750	748,654,570	9,919,962	5 28	13 3
1887.									
Rural	1,140,138	22,145,295	428,372,441	27,381,683	416,039	456,170,163	4,431,720	3 89	9.7
Urban	377,389	212,322	83,497.910	7,616,982	2,222,704	93 337,596	1,759,248	4 66	18.8
Cities	330,930	36,163	140.795,414	18.226.775	8,781,990	167,804,179	3,109,145	9 40	18.5
Total	1,848,457	22,393,780	652,665,765	53,225,440	11,420,733	717,311,938	9,300,113	5 03	13.0
1886.									
Rural	1,148,856	21,990,134	424,356,317	27,289,098	452,230	452,097,645	4,388,401	3 82	9 7
Urban	360,005	204,446	78,521,775	7,384,126	2,172,192	88,078,093	1,670,848	4 64	19.0
Cities	319,634	35,373	129,231,595	16,925,710	8,047,616	154.204,921	2,950,136	9 23	19.1
Total	1,828,495	22,229,953	632.109,687	51,598,934	10,672,038	694,380,659	9,009,385	4 93	13 0

* This large decrease in personal property was due to a change in the Assessment Act, which exempted farm live stock, etc.

POPULATION, ASSESSMENT AND TAXATION.

Statement of municipalities of Ontario (townships, towns, villages and cities) grouped into County limits, showing for 1901 the population, the area, the assessed values and amount of taxes imposed for all purposes, inclusive of schools, as shown by the assessment and collection rolls, together with the average rate per head of the resident population and mills on the dollar; also comparative totals by counties for 1900 and 1891.

Municipalities.	Population.	No. of acres assessed.	Assessed values.				Taxes imposed for all purposes.		
			Real property.	Personal property	Taxable income.	Total.	Total.	Per head.	Mills on the $
			$	$	$	$	$	$ c.	
ALGOMA:									
Townships	10,744	419,470	2,435,406	36,063	12,646	2,484,115	45,208	4 21	18.2
Towns	7,229	2,607	2,907,455	147,325	56,540	3,111,320	52,948	7 32	17.0
Totals:									
1901	17,973	422,077	5,342,861	183,388	69,186	5,595,435	98,156	5 46	17.5
1900	15,678	394,429	3,494,566	102,350	39,070	3,635,986	70,795	5 18	19 5
1891	7,035	255,731	1,917,948	55,911	6,520	1,980,379	42,762	6 08	21.6
BRANT:									
Townships	13,680	215,686	9,371,982	47,316	12,280	9,431,578	67,753	4 95	7.2
Town	3,214	685	898,226	84,589	17,600	1,000,415	22,718	7 07	22.7
City (Brantford)	16,589	2,541	6,612,548	503,050	125,107	7,240,705	146,111	8 81	20.2
Totals:									
1901	33,483	218,912	16,882,756	634,955	154,987	17,672,698	236,582	7 07	13 4
1900	33,558	219,070	16,846,172	689,852	141,285	17,677,309	225,021	6 71	12.7
1891	34,222	218,775	15,682,523	1,090,361	233,945	17,006,829	189,161	5 53	11.1
BRUCE:									
Townships	38,347	916,678	17,647,395	135,835	8,450	17,791,680	147,421	3 84	8.3
Towns	7,506	4,000	1,574,664	194,200	35,650	1,804,514	43,552	5 80	24.1
Villages	8,701	6,674	1,800,572	224,475	13,150	2,038,197	40,176	4 62	19.7
Totals:									
1901	54,554	927,352	21,022,631	554,510	57,250	21,634,391	231,149	4 24	10.7
1900	55,263	911,887	20,820,368	488,140	53,075	21,361 583	231,114	4 18	10.8
1891	57,950	826,294	21,228,073	433,225	71,975	21,733,273	220,072	3 80	10.1
CARLETON:									
Townships	28,914	564,413	9,189,133	25,025	.....	9,214,158	115,201	3 98	12.5
Villages	4,362	2,214	780,519	15,000	.....	795,519	19,245	4 41	24.2
City (Ottawa)	60,989	3,365	22,923,540	1,636,950	508,850	25,069,340	570,265	9 35	22.7
Totals:									
1901	94,265	569,992	32,893,192	1,676,975	508,850	35,079,017	704,711	7 48	20.1
1900	90,260	574,093	32,611,933	1,308,425	484,750	34,405,108	696,980	7 72	20 3
1891	73,282	566,854	24,928,715	1,446,825	147,900	26,522,440	484,615	6 61	18.3
DUFFERIN:									
Townships	16,030	355,541	7,693,675	24,600	200	7,718,475	70,854	4 42	9 2
Town	4,100	1,511	764,845	1,100	8,400	774,345	20,179	4 92	26.1
Villages	1,923	856	469,470	20,950	9,050	499,470	10,381	5 40	20.8
Totals:									
1901	22,053	357,908	8,927,990	46,650	17,650	8,992,290	101,414	4 60	11.3
1900	21,214	358,479	7,656,526	56,550	16,700	7,729,776	100,416	4 73	13.0
1891	20,159	358,060	7,156,943	80.650	17,750	7,255,343	90,326	4 48	12.4
DUNDAS:									
Townships	13,780	236,756	5,430,217	53,250	7,900	5,491,367	69,855	5 07	12.7
Villages	4,670	2,767	1,118,480	95.400	26,850	1,240,730	26,791	5 74	21.6
Totals:									
1901	18,450	239,523	6,548,697	148.650	34,750	6,732,097	96,646	5 24	14.3
1900	18,760	238,854	6,557,606	153,025	29,550	6,740,181	94,990	5 06	14.0
1891	18,753	239,305	6,833,270	153,400	44,625	7,031,295	73,247	3 91	10.4
DURHAM:									
Townships	17,869	371,936	9,575,041	16,650	4,300	9,595,991	72,941	4 08	7.6
Towns	6,819	3,980	2,275,330	202,160	60,210	2,537,700	53,638	7 87	21.1
Villages	1,505	2,386	362,915	12,300	2,200	377,415	6,693	4 45	17.7
Totals:									
1901	26,193	378,302	12,213,286	231,110	66,710	12,511,106	133,272	5 09	10.7
1900	27,047	376,694	12,600.013	243,175	68.705	12,911,893	127,956	4 73	9.1
1891	30,872	374,590	13,095,560	288,780	114,620	13,498,960	135,367	4 38	10.0

POPULATION, ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.	Population.	No. of acres assessed.	Assessed values.				Taxes imposed for all purposes.		
			Real property.	Personal property	Taxable income.	Total.	Total.	Per head.	Mills on the $
			$	$	$	$	$	$ c.	
ELGIN:									
Townships	24,440	435,837	12,520,821	54,545	5,770	12,581,136	156,114	6 39	12.4
Town	2,186	538	618,810	73,600	13,235	705,645	19,716	9 02	27.9
Villages	2,226	2,420	483,575	53,925	3,050	540,550	9,791	4 40	18.1
City (St. Thomas).	11,903	1,700	4,148,812	264,750	153,575	4,567,137	128,991	10 84	28.2
Totals:									
1901	40,755	440,495	17,772,018	446,820	175,630	18,394,468	314,612	7 72	17.1
1900	41,056	440,445	17,720,035	447,990	203,701	18,371,726	293,585	7 15	16.0
1891	39,868	440,784	17,034,080	393,925	215,215	17,643,220	231,548	5 81	13.1
ESSEX:									
Townships	32,829	430,938	11,779,533	47,175	5,200	11,831,908	202,571	6 17	17.1
Towns	10,770	4,691	3,319,022	1,023,433	69,290	4,411,745	88,989	8 26	20.2
Village	563	327	58,317	2,600	.....	60,917	1,272	2 26	20.9
City (Windsor)	12,642	2,020	5,072,163	181,400	52,300	5,305,863	142,303	11 26	26.8
Totals:									
1901	56,804	437,976	20,229 035	1,254,608	126,790	21,610,433	435,135	7 66	20.1
1900	56,080	438,157	20,060,524	1,223,595	129,290	21,413,409	431.795	7 70	20.2
1891	51,157	433,500	18,140,862	1,212,603	70,294	19,423,759	357,096	6 98	18.4
FRONTENAC:									
Townships	20,453	690,408	4,657,053	10,520	6,000	4,673,573	91,121	4 46	19.5
Villages	845	216	137,850	27,900	10,000	175,750	4,249	5 03	24.2
City (Kingston)	18,260	2 300	6,593,043	670,950	252,050	7,516,043	149,839	8 21	19.9
Totals:									
1901	39,558	692,924	11,387,946	709,370	268,050	12,365,366	245,209	6 20	19.8
1900	39,630	693,482	11,445,491	707,445	273,775	12,426,711	240,959	6 08	19.4
1891	40,475	676,665	11,408,645	1,094,245	470,190	12,973,080	220,285	5 44	17.0
GLENGARRY:									
Townships	17,076	289,434	3,838,173	5,650	200	3,844 023	53,233	3 12	13.8
Villages	2,960	1,050	451,840	10,650	.....	462,490	10,176	3 44	22.0
Totals:									
1901	20,036	290,484	4,290,013	16,300	200	4,306.513	63,409	3 16	14.7
1900	19,495	286,848	4 193,650	14,435	200	4,208,285	59,656	3 06	14.2
1891	20,113	289,394	4,219,906	56,975	2,780	4,279,661	48,227	2 40	11.3
GRENVILLE:									
Townships	12,564	271,381	4,479,359	5,550	2.600	4,487,509	46,161	3 67	10.3
Town	2,926	1,182	875,605	31,300	10,200	917,105	21,406	7 32	23.3
Villages	3,737	1,445	943,515	73,650	18,950	1,036,115	16,649	4 46	16.1
Totals:									
1901	19,227	274,008	6,298,479	110,500	31,750	6,440,729	84,216	4 38	13.1
1900	19,187	273,951	6,193,919	111,100	35,800	6,340,819	81,806	4 26	12.9
1891	19,441	274,335	5,334,372	105,205	40,150	5,479,727	67,518	3 47	12.3
GREY:									
Townships	48,791	1,064,479	16,306,779	73,425	2,300	16.382,504	177,825	3 64	10.9
Towns	13,307	9,560	3,719,084	265,875	52,782	4,037,741	96,549	7 26	23.9
Villages	3,208	1,830	470,925	34,400	2,450	507,775	11,580	3 61	22.8
Totals:									
1901	65,306	1,075,869	20,496,788	373,700	57,532	20,928,020	285,954	4 38	13 7
1900	65,333	1,072,010	20.243,164	315,991	46,495	20,605,650	277,103	4 24	13.4
1891	66,278	1,069,014	20,267,490	330,510	82,000	20,680,000	256,121	3 86	12.4
HALDIMAND:									
Townships	14,978	280,009	6,928,890	26,400	2,050	6,957,340	64,217	4 29	9.2
Town	2,142	941	620,790	64,500	3,300	688,590	13.026	6 08	18.9
Villages	2,869	1,918	518,384	38,550	5,500	562,434	11,445	3 99	20.3
Totals:									
1901	19,989	282,898	8,068.064	129,450	10,850	8,208,364	88,688	4 44	10.8
1900	20,545	283,520	7,989,886	129,350	11,150	8,130,386	89,495	4 35	11.1
1891	20,663	282,869	8,177,045	182,745	20,200	8,379,990	88,284	4 27	10.5

POPULATION, ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.	Population.	No. of acres assessed.	Assessed values.				Taxes imposed for all purposes.		
			Real property.	Personal property	Taxable Income.	Total.	Total.	Per head.	Mills on the $
			$	$	$	$	$	$ c.	
HALIBURTON : (Townships)									
1901...	5,963	563,213	496,444	9,625	800	506,869	19,980	3 35	39.4
1900....	5,858	569,283	501,055	9,375	600	511,030	21,832	3 73	42.7
1891....	5,767	563,158	479,332	11,466	200	490,998	20,747	3 60	42.3
HALTON :									
Townships	11,882	225,567	7,455,315	45,370	14,275	7,514,960	50,764	4 27	6.8
Towns	3,029	1,700	814,012	46,800	8,500	869,312	18,379	6 07	21.1
Villages	4,129	1,789	956,195	71,400	5,900	1,033,495	18,827	4 56	18.2
Totals :									
1901...	19,040	229,056	9,225,522	163,570	28,675	9,417,767	87,970	4 62	9.3
1900....	19,113	228,859	9,225,425	142,525	27,390	9,395,340	86,202	4 51	9.2
1891..	20,208	227,458	9,354,265	154,890	47,075	9,556,230	88,019	4 36	9.2
HASTINGS :									
Townships	33,382	1,036,125	9,081,010	8,450	3,500	9,092,960	127,759	3 83	14.1
Towns	7,922	2,333	1,746,556	54,420	21,700	1,822,676	45,350	5 72	24.9
Villages....	3,914	2,018	747,765	67,165	7,650	822,580	16,647	4 25	20.2
City (Belleville) :	10,104	1,700	3,547,123	270,100	85,350	3,902,573	87,809	8 69	22.5
Totals :									
1901....	55,322	1,042,176	15,122,454	400 135	118,200	15,640,789	277,565	5 02	17.7
1900 ..	55,737	1,036,074	15,169,487	383,975	102,750	15 656,212	283,900	5 09	18.1
1891 ..	54,906	986,362	15,854,055	268,205	112,350	16,234,610	272,267	4 96	16.8
HURON :									
Townships	43,011	798,524	26,786,896	108,625	4,500	26,900,021	181,599	4 22	6.8
Towns	10,966	3,050	2,803,199	224,240	46,500	3,073,939	71,900	6 56	23.4
Villages.....	5,633	4,659	1,311,694	132,855	8,550	1,453,099	26,329	4 67	18.1
Totals :									
1901....	59,610	806,233	30,901,789	465,720	59,550	31,427,059	279,828	4 69	8.9
1900....	60,112	806,148	30,617,224	431,090	59,250	31,107,564	267,302	4 45	8.6
1891....	61,272	802,412	30,383,338	456,085	137.880	30,977,303	260,966	4 26	8.4
KENT :									
Townships	33,015	564,684	17,693,243	41,085	1,450	17,735,778	246,513	7 47	13.9
Towns	9,371	4,442	2,038,274	189,560	10,300	2,238,134	57,588	6 14	25.7
Villages.... ..	1,939	961	389,010	33,000	6,400	428,410	13,578	7 00	31.7
City (Chatham)...	8,658	1,650	3,402,927	132,900	60,950	3,596,777	99,426	11 48	27.6
Totals :									
1901....	52,983	571,737	23,523,454	396,545	79,100	24,999,099	417,055	7 87	17.4
1900....	53,512	574,315	23,431,752	383,590	88,900	23,904,242	403,474	7 54	16.9
1891....	52,236	574,299	23,297,095	365,300	135,333	23,797.728	380,726	7 29	16.0
LAMBTON .									
Townships	32,762	658,708	14,364,087	35.200	2,150	14,401,437	204,321	6 24	14.2
Towns	13,601	5,100	3,415,957	240,150	123,727	3,779,834	105,388	7 74	27.9
Villages.....	5,767	4,813	1,107,282	74,020	4,650	1,185,952	25,929	4 50	21.9
Totals :									
1901....	52,130	668,621	18,887,326	349,370	130 527	19,367,223	335,588	6 44	17.3
1900....	52 453	670,159	18,770,064	361,585	125,580	19,257,029	328,175	6 26	17.0
1891....	53,181	671,024	19,214,056	389,746	138,197	19,741,999	322,812	6 07	16.4
LANARK :									
Townships	19.076	672,423	5,323,678	30,890	200	5,354,768	67,739	3 55	12.7
Towns	16,166	3,150	3,791,080	315,600	61,450	4,168,130	91,809	5 68	22.0
Village.	901	2,692	165,425	16,060	1,250	182,735	4,126	4 58	22.6
Totals :									
1901 ...	36,143	678,265	9,280,183	362,550	62,900	9,705,633	163,674	4 53	16.9
1900 ..	36,539	680,983	9,233,696	414,895	65,250	9,713,841	156,892	4 29	16.2
1891....	35,274	676,049	8,218,283	436,695	75,150	8,730,128	128,806	3 65	14.8
LEEDS :									
Townships	20,773	470,572	7,031,137	46,970	12,050	7,090,157	97,968	4 72	13.8
Towns	12,582	2,429	4,248,193	263,825	45,050	4,557,068	106,905	8 49	23.5
Villages...	1,335	1,388	261,340	5,500	3,150	269,990	5,194	3 89	19.2
Totals :									
1901....	34,690	474,389	11,540,670	316,295	60,250	11,917,215	210,067	6 06	17.6
1900....	35 013	470,404	11,500,369	284,430	68,360	11,853,159	196,741	5 62	16.6
1891....	35,793	480,104	10,492,037	451,125	132,508	11,075,670	177,209	4 95	16 0

POPULATION, ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.	Population.	No. of acres assessed.	Assessed values.				Taxes imposed for all purposes.		
			Real property.	Personal property	Taxable Income.	Total.	Total.	Per head.	Mills on the $
			$	$	$	$	$	$ c.	
LENNOX & ADDINGTON:									
Townships	18,383	439,511	6,856,921	48,640	9,700	6,915,261	75,998	4 13	11.0
Town	2,848	372	918,879	34,700	30,900	984,479	26,040	9 14	26.5
Villages	943	5,384	224,674	5,050	4,300	234,024	5,114	5 42	21.9
Totals:									
1901	22,174	445,267	8,000,474	88,390	44,900	8,133,764	107,152	4 83	13.2
1900	22,592	443,995	7,617,802	113,620	47,456	7,778,872	107,120	4 74	13.8
1891	22,866	427,226	7,634,530	71,695	44,260	7,750,485	109,636	4 79	14.1
LINCOLN:									
Townships	13,572	191,599	6,989,569	126,833	6,540	7,122,942	68,383	5 04	9.6
Town	1,250	607	501,435	13,450	400	515,285	11,422	9 14	22.2
Village	4,517	1,599	1,308,854	47,465	6,610	1,362,929	29,976	6 64	22.0
City (St. Cath'r'ns)	10,485	3,000	3,784,440	736,240	59,500	4,580,180	100,294	9 57	21.9
Totals:									
1901	29,824	196,805	12,584,298	923,988	73,050	13,581,336	210,075	7 04	15.5
1900	29,576	196,668	12,497,447	866,032	54,836	13,418,315	201,780	6 82	15.0
1891	28,826	196,291	11,660,214	782,513	138,162	12,580,889	172,859	6 00	13 7
MANITOULIN:									
Townships	5,078	224,566	730,357	24,135	.....	754,492	14,223	2 80	18.9
Towns	1,045	1,415	190,685	38,350	2,250	231,285	5,480	5 24	23.7
Totals:									
1901	6,123	225,981	921,042	62,485	2,250	985,777	19,703	3 22	20.0
1900	6,310	214,425	883,110	49,942	3,000	936,052	17,728	2 81	18.9
1891	5,678	215,715	745,136	46,554	900	792,590	16,987	2 99	21 4
MIDDLESEX:									
Townships	43,641	757,901	23,686,717	20,125	3,500	23,710,342	236,808	5 43	10.0
Towns	4,249	2,750	1,183,567	78,605	22,075	1,284,247	28,031	6 60	21.8
Villages	3,345	2,283	699,678	38,550	3,450	741,678	14,971	4 48	20.2
City (London)	39,183	4,078	15,023,038	1,719,650	549,230	17,291,918	437,552	11 17	25.3
Totals:									
1901	90,418	767,012	40,593,000	1,856,930	578,255	43,028,185	717,362	7 93	16.7
1900	90,917	766,759	40,505,183	1,878,990	570,505	42,954,678	707,985	7 79	16.5
1891	87,782	767,557	38,238,961	1,654,525	998,395	40,891,881	586,324	6 68	14.3
MUSKOKA:									
Townships	11,593	544,814	1,692,976	27,915	.....	1,720,891	35,284	3 04	20.5
Towns	6,706	1,550	1,107,893	116,900	9,200	1,233,993	33,033	4 93	26 8
Village	316	3,792	54,981	2,545	.....	57,526	583	1 84	10.1
Totals:									
1901	18,615	550,156	2,855 850	147,360	9,200	3,012,410	68,900	3 70	22.9
1900	18,334	539,321	2,6 3,795	142,450	9,750	2,765,925	61,573	3 36	22.3
1891	14,590	515,483	1,935,799	94,240	6,400	2,036,439	45,459	3 12	22.3
NIPISSING:									
Townships	9,911	305,263	875,190	38,570	.....	913,760	26,859	2 71	29.4
Towns	7,187	5,000	1,233,622	120,000	900	1,354,522	46,984	6 54	34.7
Totals:									
1901	17,098	310,263	2,108,812	158,570	900	2,268,282	73,843	4 32	32 6
1900	14,990	295,643	1,999,884	134,570	400	2,134,854	56,627	3 78	26.5
1891	8,943	196,516	955,642	147,883	20,830	1,124,355	24,061	2 69	21.4
NORFOLK:									
Townships	21,218	399,020	8,400,067	33,650	3,300	8,437,017	88,438	4 17	10.5
Town	3,007	794	851,630	54,600	37,900	944,130	22,867	7 60	24.2
Villages	3,703	1,842	775,830	43,800	4,930	824,560	17,810	4 81	21.6
Totals:									
1901	27,928	401,656	10,027,527	132,050	46,130	10,205,707	129,115	4 62	12.7
1900	27,868	404 491	10,010,112	151,885	43,817	10,205,814	128,390	4 61	12.6
1891	28,862	394,204	9,992,581	264,032	54,321	10,310,934	114,260	3 96	11.1

POPULATION, ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.	Population.	No. of acres assessed.	Assessed values.				Taxes imposed for all purposes		
			Real property.	Personal property	Taxable income.	Total.	Total.	Per head.	Mills on the $
			$	$	$	$	$	$ c.	
NORTHUMBERLAND.									
Townships	23,022	434,925	9,997,838	47,400	6,500	10,051,738	89,373	3 88	8.9
Town	4,349	2,416	1,407,442	77,150	28,350	1,512,942	33,466	7 70	22.1
Villages	5,682	5,002	1,566,967	90,260	13,020	1,670,247	28,188	4 96	16.9
Totals :									
1901....	33,053	442,343	12,972,247	214,810	47,870	13,234,927	151,027	4 57	11.4
1900....	33,205	443,112	12,950,089	207,675	47,220	13,204,984	147,915	4 45	11.2
1891....	36,045	441,097	13 483,789	365,400	103,850	13,953,039	150,626	4 18	10.8
ONTARIO:									
Townships ...	27,416	500,630	14,489,226	66,890	8,950	14,565,066	117,653	4 29	8.1
Towns	8,120	6,700	2,372,320	124,975	55,035	2,552,330	56,447	6 95	22.1
Villages	3,328	1,564	755,393	52,600	8,050	816,043	16,672	5 01	20.4
Totals :									
1901....	38 864	508,894	17,616,939	244,465	72,035	17,933,439	190,772	4 91	10.7
1900....	39,463	508,750	17,390,910	253,115	71,295	17,715,320	185,608	4 70	10.5
1891....	42,971	509,797	18,724,237	419,420	83,490	19,227,147	195,392	4 55	10.2
OXFORD:									
Townships	27,865	472,008	19,084,122	100,926	10,850	19,195,898	160,714	5 77	8.4
Towns	6,676	4,100	2,068,885	108,000	20,550	2,197,435	52,606	7 88	23.9
Villages.....	1,987	1,844	478,928	30,425	7,200	516,553	10,978	5 52	21.3
City (Woodstock).	9,257	1,525	2,550,650	165,950	44,950	2,761,550	65,399	7 06	23.7
Totals :									
1901....	45,785	479,477	24,182,585	405 301	83,550	24,671,436	289,697	6 33	11.7
1900....	45,588	479,195	24,145,686	383,975	88,500	24,618,161	270,886	5 94	11.0
1891 ...	46,910	478,753	23,882,034	310,966	120,270	24,313,270	245,899	5 24	10.7
PARRY SOUND:									
Townships	11,790	571,184	1,927,127	35,188	300	1,962,615	33,439	2 84	17.0
Town	2,628	805	409,180	32,200	900	442,280	13,740	5 23	31.1
Villages	1,234	1,070	194,411	29,495	.....	223,906	5,776	4 68	25.8
Totals ;									
1901....	15,652	573,059	2,530,718	96,883	1,200	2,628,801	52,955	3 38	20.1
1900 ...	15.285	582,657	2,490 862	87,520	1,050	2,579,432	51,529	3 37	20.0
1891....	12,739	510,974	1,998,248	76,662	8,050	2,082,960	34,350	2 70	16.5
PEEL:									
Townships	16,371	288,377	9,199,570	22,850	1,600	9.224,020	74,692	4 56	8.1
Town	2,813	1,222	*888,584	44,750	19,500	952,834	21,731	7 73	22.8
Villages	1,168	957	291,275	22,650	1,600	315,525	4,833	4 14	15.3
Totals :									
1901....	20,352	290,556	10,379,429	90,250	22,700	10,492,379	101,256	4 98	9.7
1900....	20,372	290,218	10,413,660	88,950	22,750	10,525 360	93,668	4 60	8.9
1891 ...	22,180	290,133	10,602,880	143,670	47,795	10,794,345	96,036	4 33	8.9
PERTH:									
Townships	28,141	519,819	19,585,664	20,300	2,700	19,608,664	170,982	6 08	8.7
Towns	7,961	5,684	2,416,988	210,339	39,657	2,666,981	62,673	7 87	23 5
Village	703	490	137,925	7.100	....	145,025	2,542	3 62	17.5
City (Stratford) .	10,451	2,835	3,758,355	164,400	80,780	4,003,535	99,578	9 53	24.9
Totals :									
1901....	47,256	528,828	25,898,932	402,139	123,137	26,424,208	335,775	7 11	12.7
1900 ...	48,139	527,608	25,884 370	404.560	115,780	26,404,710	321,967	6 69	12.2
1891....	48.417	524,329	24,782,664	333,955	174,435	25,291,054	281,161	5 81	11.1
PETERBOROUGH:									
Townships	18,848	571,356	7,184,534	5,550	1,000	7,191,084	71,421	3 79	9.9
Town	10,985	1,282	4,147,885	297,300	89 650	4,534,835	83,753	7 62	18.5
Villages....	4,801	2,664	1,082,769	62,225	5,600	1,150,594	21,043	4 38	18.3
Totals :									
1901..	34.634	575,302	12,415,188	365,075	96,250	12,876,513	176,217	5 09	13.7
1900....	34,515	574,368	12,285,917	309,815	120,500	12,715,332	166,781	4 83	13.1
1891 ...	32,364	539,901	12.032 919	311,700	226,655	12.571,274	148 049	4 57	11.8

* On page 94 the assessed value in Brampton should read $952,834 instead of $968,834. Mills on $ should read 22.8 instead of 22.4. The error was reported by the clerk after that portion had been printed.

POPULATION, ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.	Population.	No. of acres assessed.	Assessed values.				Taxes imposed for all purposes.		
			Real property.	Personal property	Taxable income.	Total.	Total.	Per head.	Mills on the $
			$	$	$	$	$	$ c.	
PRESCOTT:									
Townships	19,164	291 764	2,291,047	16,776	.....	2,307,823	55,048	2 87	23.9
Towns	5,091	2,020	608,071	64,150	9,100	681,321	15,316	3 01	22.5
Village	1,083	3,913	120,775	100	900	121,775	2,372	2 19	19.5
Totals:									
1901	25,338	297,697	3,019,893	81,026	10,000	3,110,919	72,736	2 87	23.4
1900	24,867	297,142	2,977,301	74,296	10,910	3,062,507	68,852	2 77	22.5
1891	20,654	294,521	2,786,517	36,440	6,200	2,829,157	49,974	2 42	17.7
PRINCE EDWARD:									
Townships	12,484	232,115	5,239,260	11,500	4,425	5,255,185	42,477	3 40	8.1
Town	3,640	552	1,232,902	76,900	13,300	1,323,102	21,934	6 03	16.6
Village	580	1,552	205,657	.....	5,000	210,657	2,335	4 03	11.1
Totals:									
1901	16,704	234,219	6,677,819	88,400	22,725	6,788,944	66,746	4 00	9.8
1900	16,308	234,649	6,664,333	87,375	21,050	6 772,758	72,935	4 31	10.8
1891	17,241	232,376	6,685,639	165,400	37,700	6,888,739	75,117	4 36	10.9
RAINY RIVER:									
Townships	2,587	89,052	746,546	42,550	450	789.546	14,575	5 63	18.5
Town	4,797	3,840	1,520,498	136,325	5,850	1,672,673	51,306	10 70	30.7
Totals:									
1901	7,384	92,892	2,277,044	178,875	6,300	2,462,219	65,881	8 92	26.8
1900	7,915	103,348	2,245,116	241,303	2,150	2,488,569	66,156	8 36	26.6
1891	3,068	17,073	1,037,018	69,625	5,300	1,131,943	17,962	5 85	15.9
RENFREW:									
Townships	34,895	982,562	4,897,563	22,081	.....	4,919,644	76,939	2 20	15.6
Towns	12,236	3,511	2,706,097	246,275	35,900	2,988,272	71,426	5 84	23 9
Villages	1,694	851	304,280	68,485	.....	372,765	5,409	3 19	14.5
Totals:									
1901	48,825	986,924	7,907,940	336,841	35,900	8,280 681	153,774	3 15	18.6
1900	47,548	980,462	7,715,587	318,675	39,600	8,073,862	142,666	3 00	17.7
1891	41,731	919,386	4,405,004	275,513	38,900	4,719,417	109,216	2 62	23.1
RUSSELL:									
Townships	15,098	252 053	1,911,574	10,550	.....	1,922,124	50,234	3 33	26.1
Villages	2,117	1,700	111,055	3,975	.....	115,030	6,289	2 97	54.7
Totals:									
1901	17,215	253,753	2,022,629	14,525	.....	2,037,154	56,523	3 28	27.7
1900	16,677	252,556	1,982,031	15,513	.....	1,997,544	52,964	3 18	26.5
1891	15,466	254,399	1,902,725	11,375	.....	1,914,100	38,220	2 47	20.0
SIMCOE:									
Townships	50,393	965,512	16,147,262	58,425	9,050	16,214,737	189,154	3 75	11.7
Towns	25,144	12,014	5,850,309	422,270	99,200	6,371,779	162,631	6 47	25.5
Villages	2,930	3,066	627,659	53,015	.....	680 674	13,526	4 62	19.9
Totals:									
1901	78,467	980,592	22,625,230	533,710	108,250	23,267.190	365,311	4 66	15 7
1900	77,927	978,338	21,133,144	390,055	109,525	21,632,724	331,440	4 25	15.3
1891	73,926	976,505	18,321,330	405,915	147,100	18,874,345	313,896	4 25	16.6
STORMONT:									
Townships	17,516	248,887	3,640,130	27,990	7,200	3,675,320	64,678	3 69	17.6
Town	6,243	740	1,651,895	78,550	21,800	1,752,245	44,270	7 11	25.3
Totals:									
1901	23,759	249,627	5,292,025	106,540	29,000	5,427 565	109,048	4 59	20.1
1900	23,790	249,558	5,241,698	149,075	32,200	5,422,973	101,827	4 28	18.8
1891	23,585	254,262	4,788,671	85,700	36,280	4,910,651	74,474	3 16	15.2
THUNDER BAY:									
Townships	1,160	250,550	518,238	500	.....	518,738	9,837	8 48	19.0
Towns	7,241	19,500	2,333,012	147,365	32,250	2,512,627	74,302	10 26	29 6
Totals:									
1901	8,401	270,050	2,851,250	147,865	32,250	3,031,365	84,139	10 02	27.8
1900	7,875	276,713	2,675,684	127,575	35,400	2,838,659	79,923	10 15	28.2
1891	4,488	256,397	2,708,903	147,850	32,300	2,889,053	51,538	11 48	17.8

POPULATION, ASSESSMENT AND TAXATION.—*Concluded.*

Municipalities.	Population.	No of acres assessed.	Assessed values.				Taxes imposed for all purposes.		
			Real property.	Personal property	Taxable income.	Total.	Total.	Per head.	Mills on the $
			$	$	$	$	$	$ c.	
VICTORIA:									
Townships	19,308	599,289	7,641,340	16,850	1,000	7,659,190	91,117	4 72	11 9
Town	6,929	1,550	1,767,500	167,950	32,550	1,968,000	52,960	7 64	26 9
Villages	3 587	2,026	621,620	44,575	1 000	667,195	12,057	3 36	18.1
Totals:									
1901	29,824	602,865	10,030,460	229,375	34,550	10,294,385	156,131	5 24	15.2
1900	30,661	601,365	10,016,346	216,740	36,050	10,269,136	151,266	4 93	14.7
1891	30,153	574,952	9,796,581	202,339	61,800	10,060,711	146,482	4 86	14.6
WATERLOO:									
Townships	22,932	306,816	12,677,024	61,475	10,760	12,749,259	101,574	4 43	8.0
Towns	26,120	8,566	8,058,640	783,100	151,250	8,992,990	173,465	6 64	19.3
Villages	3,131	1,962	857,431	87,255	8,800	953,486	14,745	4 71	15.5
Totals:									
1901	52,183	317,284	21,593,095	931,830	170,810	22,695,735	289,784	5 55	12.8
1900	52,428	317,365	21,431,980	905,725	182 059	22,519,764	272,180	5 19	12.1
1891	48,349	317,392	22,018,776	767,395	200,626	22,986,797	210,856	4 36	9.2
WELLAND:									
Townships	16,339	227,714	6,6 6.638	167,005	4,400	6,778,043	73,572	4 50	10.9
Towns	8,653	2,567	3,107,577	144,750	19,400	3,271,727	83,540	9 65	25.5
Villages	5,260	1,921	1,434,565	93,680	17,200	1,545,445	25,191	4 79	16.3
Totals:									
1901	30,252	232,202	11,148,780	405,435	41,000	11,595,215	182,303	6 03	15.7
1900	29,313	231,654	11,060,403	382,980	49,450	11,492,833	168,483	5 75	14.7
1891	27,901	231,380	10,246,617	398,730	71,990	10,717,337	133,562	4 79	12.5
WELLINGTON:									
Townships	30,991	627,790	18,231,396	87,825	15,290	18,334,511	137,739	4 44	7.5
Towns	5,636	3,196	1,393,960	116,875	15,450	1,526,285	36,731	6 52	24.1
Villages	5,744	4,152	1,274,510	103,640	7,500	1,385,650	28,280	4 92	20.4
City (Guelph)	11,271	3,210	3,471,010	243,800	63,250	3,778,060	89,242	7 92	23.6
Totals:									
1901	53,642	638,348	24,370,876	552,140	101,490	25,024,506	291,992	5 44	11.7
1900	54,307	637,901	24 307,607	606,970	140,290	25,014,867	301,812	5 56	12.1
1891	56,017	637,580	21,538,475	695,395	170,360	22,404,230	279,069	4 98	12.5
WENTWORTH:									
Townships	21,960	272,303	12,237,593	72,458	14,200	12,324,251	87,931	4 00	7.1
Town	3,212	550	826,145	84,900	30,900	941,945	23,125	7 20	24.6
Village	567	323	125,000	6,650	.....	131,650	1,785	3 15	13.6
City (Hamilton)	53,781	3,990	23,868,262	2,568,313	724,250	27,100,825	538,314	10 01	19.9
Totals:									
1901	79,520	277,166	37,057,000	2,672,321	769,350	40,498,671	651,155	8 19	16 1
1900	79,011	276,915	37,015,755	2,554,376	797,920	40,368,051	647,103	8 19	16 0
1891	75,141	276,824	32,428,309	3,391,130	980,635	36,800,074	540,046	7 19	14 7
YORK:									
Townships	40,146	536,016	22,835,308	58,650	13,500	22,907,458	226,570	5 64	9.9
Towns	11,810	5,911	3,804,267	174,450	33,900	4,012,617	91,372	7 74	22.8
Villages	7,229	5,014	1,859,948	58,790	14,635	1,933,373	40,245	5 57	20.8
City (Toronto)	205,887	9,638	116,586,152	9,053,643	4,760,070	130,399,865	2,903,113	14 10	22.3
Totals:									
1901	265,072	556,579	145,085,675	9,345,533	4,822,105	159,253,313	3,261,100	12 30	20.5
1900	258,036	557,319	142,838,577	8,488,957	4,222,870	155,550,404	3,256,913	12 62	20.9
1891	236,303	553,749	168,041,454	9,997,410	5,467,692	183,506,556	3,350,056	14 80	18.3

POPULATION.

Showing by Townships, Villages, Towns and Cities, grouped by Counties and Districts, the Population of Ontario, as taken by the Municipal Assessors, for the three Census years, 1901, 1891 and 1881, as compared with the figures of the Dominion Censuses, similarly arranged.

	1901.		1891.		1881.		Date of municipal organization.
	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	
ALGOMA :							
Balfour .....Tp.	* 922	629	755	253	.....	.....	1890
Blind River	†	490	.....	.....	.....	.....	1901
Cbapleau	750	726	.....	.....	.....	.....	1901
Drury, Denison and Graham	807	626	.....	.....	.....	.....	1894
Hallam	665	320	.....	.....	.....	.....	1893
Hilton	407	380	389	274	.....	.....	1885
Jocelyn	452	395	.....	370	.....	.....	1888
Johnson, Tarbutt and Tarbutt additional	‡ 368	906	795	471	.....	.....	1889
Laird	436	355	.....	251	.....	.....	1891
Macdonald, Meredith and Aberdeen additional	§ 818	700	.....	.....	.....	.....	1892
Nairn and Lorne	‖ 1,947	186	.....	.....	.....	.....	1896
Plummer additional	525	649	750	487	.....	.....	1891
Prince	207	204	.....	.....	.....	.....	1897
Rayside	¶ 583	760	.....	314	.....	.....	1890
St. Joseph	1,137	1,099	736	757	1,237	220	1878
Salter, May and Harrow....	1,507	736	.....	.....	.....	.....	1893
Sault Ste. Marie	1,417	933	438	392	1,119	1,706	1872
Thessalon	606	650	1,160	1,166	.....	.....	1888
Unorganized	12,403	.....	9,383	.....	8,272	.....	.....
Rural	26,209	10,744	14,406	4,735	10,628	1,920	.....
Sault Ste. Marie .....Town	7,169	6,323	2,567	2,300	.....	.....	1887
Thessalon	1,205	906	.....	.....	.....	.....	1892
Urban	8,374	7,229	2,567	2,300	.....	.....	.....
Total	34,583	17,973	16,973	7,035	10,628	1,920	.....
BRANT :							
Brantford.....Tp.	5,757	5,235	6,954	6,354	6,555	5,537	1850
Burford	4,512	4,104	4,939	4,540	5,466	4,854	1845
Dumfries S	2,922	2,572	3,137	2,832	3,490	3,448	.....
Oakland	745	700	858	774	939	875	1850
Onondaga	1,186	1,069	1,482	1,264	1,739	1,431	1850
** Tuscarora.....	3,170	.....	3,228	.....	2,891	.....	.....
Rural	18,292	13,680	20,598	15,764	21,080	16,145	.....
Paris ..... Town	3,229	3,214	3,094	3,007	3,173	3,062	1850
Brantford.....City	16,619	16,589	12,753	15,451	9,616	10,555	.....
Urban	19,848	19,803	15,847	18,458	12,789	13,617	.....
Total	38,140	33,483	36,445	34,222	33,869	29,762	.....
BRUCE :							
Albemarle .....Tp.	†† 1,962	1,451	†† 1,819	1,214	†† 1,505	794	1870
Amabel	‡‡ 3,587	3,331	‡‡ 3,890	2,652	‡‡ 3,046	1,862	1861
Arran.....	2,562	2,339	2,913	2,710	3,512	3,237	1853
Brant	4,349	3,794	4,929	3,859	5,423	4,687	1854

* Including Chelmsford and some unorganized territory. † Not given in census. ‡ Includes only Tarbutt. § According to census this only includes Macdonald and Coffin. ‖ Including Hyman and some unorganized territory. ¶ Including some unorganized territory. ** An Indian reserve, not municipally organized. †† Including Cape Croker Indian Reserve. ‡‡ Including Saugeen Indian Reserve.

NOTE.—The municipal population is from assessment rolls taken in same year. The Dominion census is arranged in this table according to municipal boundaries.

POPULATION—*Continued.*

	1901.		1891.		1881.		Date of municipal organization.
	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	
BRUCE—*Continued.*							
Bruce	3,109	2,970	3,793	3,208	4,236	3,650	1856
Carrick	5,023	4,667	5,503	4,986	5,909	4,940	1856
Culross	2,955	2,793	3,345	3,101	3,807	3,287	1856
Eastnor	1,830	1,655	1,484	1,317	1,364	1,197	1878
Eldersli e	2,458	2,139	3,047	2,877	3,273	3,022	1856
Greenock	3,085	2,740	3,389	2,938	3,751	2,965	.....
Huron	3,539	2,979	4,125	3,612	5,175	4,259	1854
Kincardine	2,855	2,621	3,618	3,306	4,506	3,575	.....
Kinloss	2,355	2,232	2,903	2,647	3,628	3,265	1855
Lindsay and St. Edmunds	1,374	1,169	837	737	*	*	1883
Saugeen	1,581	1,467	1,813	1,661	2,090	1,841	1854
Rural	42,624	38,347	47,408	40,825	51,225	42,581	.....
Chesley ....Vil.	1,734	1,720	1,437	1,515	893	789	1880
Lucknow	1,111	996	1,285	1,193	1,162	1,164	1875
Paisley	1,086	1,103	1,328	1,119	1,154	943	1875
Port Elgin	1,313	1,274	1,659	1,803	1,400	1,394	1874
Southampton	1,636	1,620	1,437	1,404	1,141	1,116	1858
Tara	625	664	695	704	561	688	1881
Teeswater	930	878	1,128	1,098	861	918	1875
Tiverton	470	446	550	508	545	632	1877
Kincardine ....Town	2,077	2,172	2,631	2,836	2,876	2,593	.....
Walkerton	2,971	3,049	3,061	3,030	2,604	2,612	.....
Wiarton	2,443	2,285	1,984	1,915	796	977	1880
Urban	16,396	16,207	17,195	17,125	13,993	13,826	.....
Total	59,020	54,554	64,603	57,950	65,218	56,407	.....
CARLETON:							
Fitzroy ....Tp.	2,767	2,391	2,940	2,443	3,378	2,798	.....
Gloucester	7,778	6,584	6,823	6,293	6,254	5,000	1847
Goulbourn	2,765	2,447	2,784	2,458	3,381	3,235	1850
Gower N.	2,235	2,003	2,383	2,111	2,481	2,388	.....
Huntley	2,236	2,233	2,321	2,208	2,534	2,393	.....
March	1,184	849	1,264	1,059	1,318	1,122	1822
Marlborough	1,584	1,524	1,703	1,532	2,090	1,852	.....
Nepean	5,840	5,282	6,201	5,736	8,044	7,058	.....
Osgoode	4,818	4,667	4,858	4,235	4,753	3,995	1850
Torbolton	1,002	934	1,023	939	1,024	1,118	.....
Rural	32,209	28,914	32,300	29,014	35,257	30,959	.....
Hintonburgh ....Vil.	2,798	2,600	†	†	†	†	1894
Ottawa East	1,500	1,300	741	684	†	†	1890
Richmond	469	462	447	355	439	381	1850
Ottawa ....City	59,928	60,989	44,142	43,229	28,407	26,425	1855
Urban	64,695	65,351	45,330	44,268	28,846	26,806	.....
Total	96,904	94,265	77,630	73,282	64,103	57,765	.....
DUFFERIN:							
Amaranth ....Tp.	2,798	2,643	2,799	2,645	2,914	2,504	.....
Garafraxa E.	1,895	1,777	2,169	1,865	2,635	2,159	1869
Luther E	1,698	1,631	2,178	2,016	1,557	1,357	1881
Melancthon	3,831	3,747	3,822	3,173	3,099	2,514	1855
Mono	3,111	3,480	3,518	3,181	4,097	3,510	.....
Mulmur	3,253	2,752	3,661	3,192	4,211	3,836	1851
Rural	16,586	16,030	18,147	16,072	18,513	15,880	.....

* Attached to Eastnor.

† Included in Nepean Township.

POPULATION.—*Continued.*

	1901.		1891.		1881.		Date of municipal organization.
	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	
DUFFERIN—*Continued.*							
Grand Valley .....Vil.	751	760	*	*	*	*	1898
Shelburne.....	1,188	1,163	1,202	1,160	733	657	1879
Orangeville	2,511	4,100	2,962	2,927	2,847	2,523	.. .
Urban	4,450	6,023	4,164	4,087	3,580	3,180	.....
Total	21,036	22,053	22,311	20,159	22,093	19,060	.....
DUNDAS:							
Matilda .....Tp.	4,016	3,833	4,138	4,102	4,692	3,785	.....
Mountain	3,427	2,931	3,422	2,980	3,719	3,098	1840
Williamsburg	3,906	3,690	4,308	3,836	4,671	4,186	1849
Winchester	3,585	3,326	3,621	3,340	4,796	4,032	.....
Rural	14,934	13,780	15,489	14,258	17,878	15,101	.....
Chesterville.....Vill.	932	884	775	699	†	†	1890
Iroquois..... ..	1,097	1,130	1,047	1,122	1,001	902	1857
Morrisburg	1,693	1,526	1,859	1,696	1,719	1,704	1861
Winchester	1,101	1,130	962	978	†	†	1888
Urban	4,823	4,670	4,643	4,495	2,720	2,606	.....
Total	19,757	18,450	20,132	18,753	20,598	17,707	.....
DURHAM:							
Cartwright.....Tp.	1,768	1,702	2,026	1,979	2,357	2,255	1842
Cavan.....	2,729	2,418	3,106	2,928	3,479	3,213	.....
Clarke	3,788	3,610	4,427	4,294	5,169	5,096	.....
Darlington	4,174	3,956	4,757	4,522	5,465	5,044	1837
Hope	3,273	3,250	3,887	3,847	4,522	3,946	1850
Manvers	3,357	2,933	4,047	3,551	3,976	3,319	.....
Rural	19,089	17,869	22,250	21,121	24,968	22,873	.....
Millbrook..... .....Vill.	917	900	971	896	1,148	1,062	1880
Newcastle	645	605	787	735	1,060	1,038	1856
Bowmanville.....Town	2,731	2,728	3,377	3,338	3,504	3,462	1858
Port Hope	4,188	4,091	5,042	4,782	5,585	5,382	1834
Urban	8,481	8,324	10,177	9,751	11,297	10,944	.....
Total	27,570	26,193	32,427	30,872	36,265	33,817	.....
ELGIN:							
Aldborough .. .. Tp.	5,341	4,426	5,299	4,695	4,718	4,280	1852
Bayham.	3,771	3,540	3,856	3,167	4,649	3,830	1852
Dorchester S.	1,637	1,265	1,624	1,522	1,844	1,716	1852
Dunwich	3,658	3,045	3,663	3,017	4,290	3,649	.....
Malahide.....	3,795	3,592	3,851	3,718	4,415	3,861	1858
Southwold	4,338	3,839	4,766	4,273	5,206	4,442	1850
Yarmouth.....	5,089	4,733	5,471	4,806	5,575	5,393	1850
Rural	27,629	24,440	28,530	25,198	30,697	27,171	.....
Dutton Vill	863	863	838	693	‡	‡	1891
Port Stanley	552	542	616	654	674	650	1875
Springfield.....	501	488	463	425	555	474	1878
Vienna	352	333	398	358	528	495	1854
Aylmer .....Town	2,204	2,186	2,166	2,179	1,540	1,407	.....
St. Thomas..... City	11,485	11,903	10,366	10,361	8,367	8,853	.....
Urban	15,957	16,315	14,847	14,670	11,664	11,879	.....
Total	43,586	40,755	43,377	39,868	42,361	39,050	.....

* Included in Luther East Tp. † Included in Winchester Tp. ‡ Included in Dunwich Tp.

POPULATION.—*Continued.*

—	1901.		1891.		1881.		Date of municipal organization.
	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	
ESSEX:							
Anderdon .....Tp.	2,071	1,688	2,205	1,934	2,406	2,003	....
Colchester N.	2,145	1,894	1,720	1,499	2,090	1,514	.. ..
Colchester S.....	2,763	2,803	2,827	2,415	2,727	2,461	1880
Gosfield, N	1 999	1,984	4,071	1,733	3,494	3,345	... ..
Gosfield, S.	2,417	2,134	*	1,951	*	*	1888
Maidstone.....	3,117	3,012	3.127	2,588	3,260	2,993	.....
Malden	1,489	1,369	1,573	1,527	1,727	1,531	1838
Mersea.....	4,172	4,159	3,788	3,567	3,552	3,143	.....
Pelee Island.....	669	648	605	590	361	330	1879
Rochester	2,625	2,480	2,806	2,222	2,483	2,018	.....
Sandwich E	2,794	2,487	4,378	3,884	4,386	3,843	1860
Sandwich, S.....	1,710	1,623	†	†	†	†	1893
Sandwich W.	2,738	2,473	2,643	2,394	2,860	2,366	1864
Tilbury N	2,192	2,053	5,100	4,360	4,410	3,530	1892
Tilbury, W.....	2,209	2,027	‡	‡	‡	‡	.....
Rural	35,110	32,829	34,843	30,664	33,756	29,077	.....
Belle River ....Vill.	607	563	657	627	556	605	1877
Amherstburg ....Town	2,222	2,119	2,279	2,260	2,672	2,543	.....
Essex	1.391	1,410	1.709	1,789	¶	¶	1884
Kingsville.....	1,537	1,824	1,935	1,289	863	822	1878
Leamington	2,451	2,390	1,910	1,948	1,411	1,152	1877
Sandwich	1,450	1,435	1,352	1,170	1,143	1,038	1851
Walkerville	1,595	1,592	933	882	‖	‖	1890
Windsor .....City	12,153	12,642	10,322	10,528	6,561	6,283	1854
Urban	23,406	23,975	20,497	20,493	13,206	12,443	.....
Total	58,516	56,804	55,340	51,157	46,962	41,520	.....
FRONTENAC:							
Barrie .....Tp.	682	558	670	596	486	419	.....
Bedford	1,730	1,466	1,837	1,406	2,019	1,568	1842
Clarendon and Miller.....	941	825	929	843	685	642	.....
Hinchinbrooke	1,545	1,265	1,465	1,196	1,322	1,155	1857
Howe Island	361	329	422	400	479	396	1872
Kennebec	1,404	1,264	1,428	1,243	1,149	935	.....
Kingston.....	3,176	2,325	3,349	2,500	3,739	2,716	.....
Loughborough.....	2,144	1,755	2,218	1,762	2,394	1,855	.....
Olden	1,126	1,029	1,002	946	829	728	.....
Oso	1,358	1,060	1,176	1,115	959	779	1866
Palmerston and Canonto....	1,133	1,076	1,064	821	1,005	739	.....
Pittsburg	2,544	2 159	3,000	2,491	3,352	2,760	.....
Portland	2,502	2,104	2,512	2,096	2,452	2,300	1853
Storriogton	2,062	1,821	2,285	1,965	2,811	2,217	1850
Wolfe Island	1,796	1,417	2,003	1,657	2,383	1,917	.....
Rural	24,504	20,453	25,360	21,037	26,064	21,126	.....
Garden Island .....Vill.	242	257	412	389	495	502	1866
Portsmouth	1,827	588	1,974	847	1,734	999	1859
Kingston ..... City	17,961	18,260	19,263	18,202	14,091	14,260	1846
Urban	20,030	19,105	21,649	19,438	16,320	15,761	.....
Total	44,534	39,558	47,009	40,475	42,384	36,887	.....
GLENGARRY:							
Charlottenburg.....Tp.	5,280	4,896	5,657	5,073	6,354	5,473	1850
Kenyon	4,700	4,050	5,376	4,675	5,491	4,278	.....
Lancaster	4,051	3,654	4,084	3,744	4,851	4,164	.....
Lochiel.....	4,857	4,476	5,016	4,517	5,525	4,480	1818
Rural	18,888	17,076	20,133	18,009	22,221	18,395	.....

* United to Gosfield N. † United to Sandwich East. ‡ United to Tilbury N.
¶ Taken out of Colchester N Tp. ‖ Taken out of Sandwich E. Tp.

POPULATION—*Continued.*

—	1901.		1891.		1881.		Date of municipal organization.
	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	
GLENGARRY.—*Continued.*							
Alexandria ..... Vill.	1,911	1,729	1,614	1,465	*	*	1884
Lancaster	583	531	700	659	†	†	1889
Maxville	749	700	‡		††	††	1892
Urban	3,243	2,960	2,314	2,104	.....	.....	.....
Total	22,131	20,036	22,447	20,113	22,221	18,395	.....
GRENVILLE:							
Augusta ..... Tp.	4,166	3,798	4,534	4,111	5,096	4,418	1850
Edwardsburg	4,268	3,630	4,517	3,744	4,799	4,143	.....
Gower S.	868	802	960	816	1,022	842	.....
Oxford on Rideau	2,920	2,695	3,307	3,100	3,785	3,118	.....
Wolford	1,855	1,639	2,115	1,770	2,401	1,900	.....
Rural	14,077	12,564	15,433	13,541	17,103	14,421	.....
Cardinal ..... Vill.	1,378	1,284	959	964	632	546	1880
Kemptville	1,523	1,500	1,226	1,058	1,188	987	1857
Merrickville	1,024	953	1,072	954	819	719	1860
Prescott ..... Town	3,019	2,926	2,919	2,924	2,999	2,930	1860
Urban	6,944	6,663	6,176	5,900	5,638	5,182	.....
Total	21,021	19,227	21,609	19,441	22,741	19,603	.....
GREY:							
Artemesia ..... Tp.	3,923	3,553	4,092	3,640	4,576	3,817	1850
Bentinck	3,551	2,997	5,323	4,811	5,472	4,721	.....
Collingwood	8,902	3,728	3,932	3,463	4,915	4,366	.....
Derby	2,146	1,772	2,200	1,941	2,363	1,955	1846
Egremont	3,607	3,139	3,904	3,221	4,455	3,754	1850
Euphrasia	3,441	3,149	3,567	3,228	3,688	3,031	.....
Glenelg	2,754	2,721	3,318	3,037	4,001	3,725	1850
Holland	3,504	3,102	3,602	3,133	3,688	3,120	1851
Keppel	4,160	3,467	3,774	3,433	3,449	3,102	1864
Normanby	4,630	4,399	5,006	5,387	6,140	5,815	1849
Osprey	3,075	3,119	3,314	3,181	3,512	3,494	1852
Proton	3,378	2,931	3,297	3,020	3,402	2,906	1857
St. Vincent	3,108	2,823	3,494	3,360	4,119	3,349	1850
Sarawak	1,362	1,255	1,201	1,024	972	846	1868
Sullivan	3,697	3,314	4,164	3,617	4,143	3,527	1850
Sydenham	3,406	3,322	3,903	3,756	4,293	3,860	1850
Rural	53,644	48,791	58,091	53,246	63,188	55,388	.....
Dundalk Vill	762	786	696	636	¶	¶	1887
Hanover	1,392	1,397	‖	‖	‖	‖	1900
Markdale	892	1,025	756	665	§	§	1888
Durham ..... Town	1,422	1,404	1,273	1,192	1,059	1,033	1872
Meaford	1,916	1,895	1,999	1,852	1,866	1,790	1875
Owen Sound	8,776	9,255	7,497	7,867	4,426	4,309	1856
Thornbury	786	753	902	820	*	*	1887
Urban	15,946	16,515	13,123	13,032	7,351	7,132	.....
Total	69,590	65,306	71,214	66,278	70,539	62,520	.....
HALDIMAND:							
Canborough ..... Tp.	966	842	1,118	998	1,220	1,104	.....
Cayuga, N.	1,657	1,476	1,893	1,728	2,109	1,838	1850
Cayuga, S	833	701	925	825	959	900	.....

* Included in Lochiel Tp. † Included in Lancaster Tp. ‡ Included in Kenyon Tp.
‖ Included to Bentinck. ¶ Included in Proton. § Included in Glenelg Tp. †† Included in Collingwood Tp.

POPULATION.—*Continued.*

—	1901.		1891.		1881.		Date of municipal organization.
	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	
HALDIMAND —*Continued.*							
Dunn	354	816	984	930	1,040	936	.....
Moulton	1,931	1,825	1,894	1,685	1,799	1,546	1840
Oneida	2,023	1,365	2,400	1,715	2,863	2,021	.....
Rainham	1,802	1,676	2,010	1,851	2,217	1,927	1850
Seneca	1,885	1,762	2,231	2,081	2,545	2,469	1850
Sherbrooke	396	398	436	419	494	465	.....
Walpole	4,189	4,117	4,922	3,974	5,854	5,051	1850
Rural	16,536	14,978	18,813	16,206	21,100	18,257	.....
Caledonia.....Vill.	801	803	968	841	1,242	1,102	1853
Cayuga	771	1,158	822	880	830	758	1860
Hagersville	1,020	903	1,061	910	*	*	1887
Dunnville.....Town	2,105	2,142	1,776	1,846	1,808	1,591	1860
Urban	4,697	5,011	4,627	4,477	3,880	3,451	.....
Total	21,233	19,989	23,440	20,683	24,980	21,708	.....
HALIBURTON :							
Anson and Hindon .....Tp.	300	267	275	272	371	322	.....
Cardiff	698	679	612	582	497	515	1878
Dysart, etc	1,116	964	1,082	965	1,087	914	.....
Glamorgan	527	470	505	503	902	864	1881
Lutterworth	464	402	549	509	586	491	.....
Minden	1,170	1,170	1,182	1,155	1,110	1,075	.....
Monmouth	629	538	548	509	†	†	.....
Sherborne, etc	299	302	583	564	551	495	1866
Snowdon	856	698	1,014	708	807	540	1860
Stanhope	500	473	‡	‡	‡	‡	1866
Rural	6,559	5,963	6,350	5,767	5,911	5,216	.....
HALTON :							
Esquesing.....Tp.	3,787	3,547	4,435	3,748	4,998	4,585	1850
Nassagaweya	2,357	2,269	2,809	2,642	2,800	2,748	1851
Nelson	2,776	2,688	3,269	2,857	3,340	3,038	.....
Trafalgar	3,694	3,378	4,153	3,747	4,382	4,384	1850
Rural	12,614	11,882	14,666	12,994	15,520	14,756	.....
Acton .....Vil.	1,484	1,471	1,209	1,228	848	805	1874
Burlington	1,119	1,320	1,325	1,345	1,068	1,046	1874
Georgetown	1,313	1,338	1,509	1,542	1,471	1,562	1864
Milton .....Town	1,372	1,321	1,450	1,284	1,302	1,192	1855
Oakville	1,643	1,708	1,823	1,815	1,710	1,709	.....
Urban	6,931	7,158	7,316	7,214	6,399	6,314	.....
Total	19,545	19,040	21,982	20,208	21,919	21,070	.....
HASTINGS :							
Bangor, Wicklow and McClure.....Tp.	1,062	952	1,026	822	855	612	.....
Carlow	655	594	569	482	935	869	1870
Dungannon	867	751	754	651	970	920	1891
Elzevir and Grimsthorpe	1,501	1,292	1,506	1,176	1,514	1,132	1857
Faraday	1,339	1,250	705	721	¶	¶	1891
Hungerford	3,798	3,456	4,109	4,620	4,559	4,005	.....
Huntingdon	2,612	2,368	2,562	2,086	2,555	2,377	.....
Limerick	597	530	508	464	1,550	1,501	1886
Madoc	2,790	2,231	2,967	2,459	3,182	2,700	1876
Marmora and Lake	2,099	1,577	2,176	1,822	2,084	1,711	.....
Mayo	597	510	518	593	‖	‖	1891

* Included in Walpole. † Joined with Glamorgan. ‡ Joined with Sherborne, etc.
¶ United to Dungannon. ‖ United with Carlow.

POPULATION.—*Continued.*

—	1901.		1891.		1881.		Date of municipal organization.
	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	
HASTINGS.—*Continued.*							
Monteagle and Herschel	1,891	1,961	1,552	1,503	1,072	982	1875
Rawdon	3,434	3,160	3,629	3,114	3,692	2,910	.....
Sidney	4,438	3,880	4,685	4,128	4,842	3,698	1850
Thurlow	4,210	3,894	4,817	4,822	4,922	4,392	1850
Tudor and Cashel	832	859	843	779	*	*	1860
Tyendinaga	4,743	3,379	5,135	4,028	6,162	4,759	1850
Wollaston	834	738	771	686	*	*	1881
Rural	38,299	33,382	38,832	34,956	38,894	32,568	.....
Madoc ..... Vill.	1,157	1,190	1,134	1,031	1,065	1,063	1878
Marmora	961	706	†	†	†	†	1901
Stirling	845	801	850	801	874	814	1858
Tweed	1,168	1,217	651	732	‡	‡	1891
Deseronto ..... Town.	3,527	3,746	3,338	3,001	1,670	1,331	1872
Trenton	4,217	4,176	4,363	4,165	3,042	2,726	1853
Belleville ..... City.	9,117	10,104	9,916	10,220	9,516	10,038	.....
Urban	20,992	21,940	20,252	19,950	16,167	15,972	.....
Total	59,291	55,322	59,084	54,906	55,061	48,540	.....
HURON:							
Ashfield ..... Tp.	3,497	3,284	4,010	3,539	4,766	3,719	1852
Colborne	1,866	1,756	2,215	1,956	2,663	2,114	.....
Goderich	2,528	2,399	2,907	2,661	3,444	2,785	.....
Grey	3,557	3,343	4,022	3,744	4,577	4,026	1856
Hay	3 627	3,600	4,244	3,639	4,421	3,486	.....
Howick	4,140	3,838	4,439	4,314	5,616	5,256	1856
Hullett	2,898	2,700	3,281	2,982	3,875	3,373	1852
McKillop	2,685	2,615	3,086	2,820	4,046	3,699	.....
Morris	2,606	2,407	3,253	2,894	3,815	3,444	1856
Stanley	2,152	2,138	2,470	2,328	2,940	2,400	1835
Stephen	4,172	4,141	4,271	3,606	4,504	3,775	1852
Tuckersmith	2,463	2,431	2,867	2,761	3,550	3,248	1835
Turnberry	2,141	2,105	2,452	2,270	3,010	2,355	1857
Usborne	2,367	2,316	2,528	2,392	3,074	2,763	.....
Wawanosh, E	1,960	1,858	2,078	1,905	2,674	2,304	1852
Wawanosh, W	2,218	2,080	2,337	2,048	2,795	2,284	.....
Rural	44,877	43,011	50,460	45,859	59,770	51,031	.....
Bayfield ..... Vill.	558	563	595	578	679	694	1876
Blyth	871	862	927	925	914	1,161	1877
Brussels	1,114	1,166	1,204	1,193	1,280	1,335	1873
Exeter	1,792	1,791	1,809	1,615	1,725	1,586	1873
Hensall	820	823	¶	¶	¶	¶	1897
Wroxeter	446	428	504	486	590	568	1875
Clinton ..... Town	2,547	2,434	2,635	2,421	2,606	2,598	1858
Goderich	4,158	4,060	3,839	3,595	4,564	4,195	.....
Seaforth	2,245	2,280	2,641	2,544	2,480	2,414	.....
Wingham	2,392	2,192	2,167	2,056	1,918	1,953	1874
Urban	16,943	16,599	16,321	15,413	16,756	16,504	.....
Total	61,820	59,610	66,781	61,272	76,526	67,535	.....
KENT:							
Camden ..... Tp.	2,811	2,550	2,991	2,681	3,239	2,616	.....
Chatham	6,049	4,749	‖ 6,207	5,145	5,907	4,871	.....
Dover	4,464	4,210	4,415	3,814	4,447	3,429	1848
Harwich	5,494	4,534	6,017	5,370	6,410	4,999	1852

* United to Limerick. † Included in Marmora Tp. ‡ Included in Hungerford. ¶ Included in Hay and Tuckersmith Tps. ‖ Not including the Indian reserve of Walpole Island, 828. (See Sombra, p. 136.)

POPULATION.—*Continued.*

	1901.		1891.		1881.		Date of municipal organization.
	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	
KENT.—*Continued.*							
Howard	3,243	3,453	3,626	3,640	3,962	4,232	....
Orford	3,347	2,613	3,479	2,744	3,766	2,880	1828
Raleigh	4,844	4,897	4,955	4,443	5,298	4,570	1850
Romney	2,103	1,752	1,534	1,441	1,082	961	1850
Tilbury E	3,456	3,366	3,033	2,522	2,872	2,521	1850
Zone	1,326	1,191	1,401	1,246	1,495	1,355	.....
Rural	37,137	33,015	37,658	33,046	38,478	32,434	.....
Thamesville ..... Vill.	864	889	798	773	740	68:	1874
Tilbury	1,012	1,050	925	816	*	*	1887
Blenheim ..... Town	1,653	1,639	1,708	1,675	1,212	1,010	1875
Bothwell	907	900	897	900	965	851	1867
Dresden	1,613	1,508	2,058	1,915	1,979	1,829	.....
Ridgetown	2,405	2,494	2,254	2,161	1,538	1,429	1877
Wallaceburg	2,763	2,830	2,726	2,186	1,525	1,140	1875
Chatham ..... City	9,068	8,658	9,052	8,764	7,873	7,656	1853
Urban	20,285	19,968	20,418	19,190	15,832	14,597	.....
Total	57,422	52,983	58,076	52,236	54,310	47,031	.....
LAMBTON:							
Bosanquet ..... Tp	2,862	2,530	2,866	2,516	3,360	2,863	.....
Brooke	3,678	3,383	3,874	3,188	3,492	3,006	1842
Dawn	3,659	3,363	3,480	3,012	2,026	1,850	.....
Enniskillen	4,745	4,659	5,006	4,616	3,588	2,576	.....
Euphemia	2,321	2,142	2,523	2,208	2,791	2,497	.....
Moore	4,795	4,401	5,079	5,683	5,146	4,919	1830
Plympton	3,621	3,306	3,929	3,368	4,495	4,165	.....
Sarnia	2,632	2,061	2,937	2,009	3,583	2,202	1849
Sombra	† 5,231	3,837	† 5,035	3,928	4,601	2,988	1852
Warwick	3,329	3,080	3,644	3,290	4,052	3,649	.....
Rural	36,873	32,762	38,373	33,818	37,134	30,714	.....
Alvinston ..... Vill.	898	800	1,006	979	830	750	1881
Arkona	468	450	463	471	569	595	1877
Oil Springs	1,018	974	1,138	1,129	552	514	1865
Point Edward	780	814	1,881	1,792	1,293	1,389	1879
Thedford	633	602	616	619	685	711	1878
Watford	1,279	1,378	1,299	1,185	1,132	1,405	1874
Wyoming	829	749	871	777	886	764	1874
Forest ..... Town	1,553	1,574	2,057	1,550	1,614	1,402	1873
Petrolea	4,135	4,015	4,357	4,363	3,465	3,081	.....
Sarnia	8,176	8,012	6,692	6,498	3,874	4,270	1856
Urban	19,769	19,368	20,380	19,363	14,900	14,881	.....
Total	56,642	52,130	58,753	53,181	52,034	45,595	....
LANARK:							
Bathurst ..... Tp.	2,508	2,378	2,757	2,341	2,960	2,677	1850
Beckwith	1,646	1,615	1,766	1,680	1,928	1,791	1850
Burgess N	952	824	1,117	1,007	1,287	1,034	.....
Dalhousie and Sherbrooke N.	1,829	1,725	2,142	2,023	2,528	2,458	1851
Darling	771	714	739	684	767	694	1854
Drummond	2,078	1,916	2,202	2,025	2,378	2,188	1850
Elmsley N.	1,087	1,009	1,233	1,076	1,319	1,130	.....
Lanark	1,751	1,672	1,904	1,747	2,029	1,747	.....
Lavant	569	523	679	605	‡	‡	1884
Montague	2,068	1,833	2,232	2,143	2,683	2,158	1850

* Included in Tilbury E. and W. Tps. in 1881. † Including Indian reserve of Walpole Island, but not included in municipal. ‡ Included with Dalhousie and Sherbrooke N. Tps.

POPULATION.—*Continued.*

—	1901.		1891.		1881.		Date of municipal organization.
	Dominion census	Municipal assessment.	Dominion census	Municipal assessment.	Dominion census.	Municipal assessment.	
LANARK.—*Continued.*							
Pakenham	1,872	1,921	2 007	1,864	2,284	1,792	.....
Ramsay	2,383	2,096	2,601	2,185	2,899	2,377	.....
Sherbrooke S.	924	850	984	865	948	782	....
Rural	20,428	19,076	22,363	20,245	24,010	20,828	.....
Lanark ..... Vill.	979	901	859	828	752	666	1862
Almonte ..... Towu	3,023	3,038	3,068	2,925	2 684	2,631	1871
Carleton Place	4,059	4,072	4,435	4,315	1,975	1,800	.....
Perth	3,588	3,637	3,136	3,205	2,467	2,755	1851
Smith's Falls	5,155	5,419	3,864	3,756	2,087	1,980	.....
Urban	16,804	17,067	15,362	15,029	9,965	9,832	.....
Total	37,232	36,143	37,725	35,274	33,975	30,660	.....
LEEDS:							
Bastard and Burgess S...Tp.	3,006	2,296	3 319	3,183	3,500	2,665	....
Crosby N	2,030	1,775	2,097	1,718	1,999	1,680	1850
Crosby S.	1,811	1,588	1,849	1,743	1,968	1,865	.....
Elizabethtown	4,872	3,859	4 726	3,694	4,905	4,214	.....
Elmsley, S.	889	828	977	812	1,121	960	1850
Kitley	2,089	1,946	2,336	2,242	2,593	2,261	1850
Leeds and Lansdowne, Front	3,085	2 717	3,387	2,838	3,587	3,028	.....
Leeds and Lansdowne, Rear.	2,386	2,257	2,492	2,178	2,653	2,401	.....
Yonge and Escott, Front	2,680	2,372	2,8*7	2,513	3,107	2,527	.....
Yonge and Escott, Rear	1,276	1,135	1,413	1,261	2,103	1,985	.....
Rural	24,124	20,773	25,453	22,'82	27,536	23,586	.....
Athens ..... Vill.	953	954	904	786	*	*	1890
Newboro	432	381	462	432	418	387	1876
Brockville ..... Town	8,940	8,864	8,791	8,864	7,609	7,473	1832
Gananoque	3,526	3,718	3,669	3,529	2,871	2,736	1863
Urban	13,851	13,917	13,826	13,611	10,898	10,596	.....
Total	37,975	34,690	39,279	35,793	38,434	34,182	.....
LENNOX AND ADDINGTON:							
Adolphustown .....Tp.	544	486	720	500	737	649	.....
Amherst Island	821	825	938	903	1,089	1,117	.....
Camden E.	4,611	5,321	4,745	5,369	5,134	4,142	...
Denbigh, Abinger and Ashby	1,056	1,011	870	850	621	536	1866
Ernestown	3,317	2,998	3,597	2,874	3,961	3,354	1850
Fredericksburg N.	1,523	1,393	1,659	1,404	1,720	1,583	1859
Fredericksburg S	1,103	817	1,125	968	1,340	1,195	1858
Kaladar, Anglesea and Effingham	1,364	1,248	1,232	1,075	990	895	.....
Richmond	2,563	2,261	2,898	2,528	3,241	2,477	1849
Sheffield.	2,280	2,023	2,355	2,082	2,591	2,243	1850
Rural	19,182	18,383	20,139	18,553	21,424	18,191	....
Bath ..... Vill.	407	348	530	505	546	589	.....
Newburgh	614	595	648	587	834	760	1858
Napanee.....Town	3,143	2,848	3,433	3,221	3,680	3,313	...
Urban	4,164	3,791	4,611	4,313	5,060	4,662	.....
Total	23,346	22,174	24.750	22,866	26,484	22,853	.....

* Included in Yonge and Escott Rear Tp.

POPULATION.—*Continued.*

	1901.		1891.		1881.		
	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Date of municipal organization.
LINCOLN:							
Caistor	1,784	1,705	2,002	1,795	2,164	1,916	1850
Clinton	2,056	1,882	2,137	1,955	2,399	2,091	.....
Gainsborough	2,463	2,249	2,683	2,413	3,001	2,615	.....
Grantham	1,941	1,812	1,928	1,816	2,218	2,083	.....
Grimsby N.	1,312	1,174	1,095	1,019	2,416	2,327	.....
Grimsby S.	1,379	1,359	1,610	1,470	*	*	1882
Louth	1,848	1,694	1,774	1,548	1,995	1,664	1793
Niagara	1,897	1,697	1,845	1,820	2,004	1,832	1850
Rural	14,680	13,572	15,074	13,836	16,197	14,528	.....
Beamsville Vill	832	797	911	881	685	692	1879
Grimsby	1,001	973	883	846	692	645	1876
Merritton	1,710	1,690	1,813	1,730	1,798	1,704	1874
Port Dalhousie	1,125	1,057	879	836	1,129	1,000	1863
Niagara Town	1,258	1,250	1,349	1,320	1,441	1,445	1845
St. Catharines City	9,946	10,485	9,170	9,377	9,631	10,026	.....
Urban	15,872	16,252	15,005	14 990	15,376	15,512	.....
Total	30,552	29,824	30,079	28,826	31,573	30,040	.....
MANITOULIN:							
Assiginack Tp	2,592	1,131	818	944	881	907	1876
Billings	751	342	635	265	.....	.....	1885
Burpee	285	274	186	213	.....	.....	1887
Carnarvon	757	698	500	577	550	381	1879
Cockburn Island	301	181	240	173	.....	.....	1885
Gordon	761	580	455	900	.....	.....	1882
Howland	1,217	1,138	1,139	800	1,502	932	1874
Sandfield	283	255	280	269	482	462	1880
Tehkummah	521	479	405	337	.....	.....	1882
Unorganized	2,440	.....	4,667	.....	5,045	.....	.....
Rural	9,908	5,078	9,325	4,478	8,460	2,682	.....
Gore Bay Town	723	510	472	500	.....	.....	1890
Little Current	728	535	997	700	.....	.....	1890
Urban	1,451	1,045	1,469	1,200	.....	.....	...
Total	11,359	6,123	10,794	5,678	8,460	2,682	.....
MIDDLESEX:							
Adelaide Tp	2,233	1,972	2,616	2,360	3,108	2,980	.....
Biddulph	2,263	2,357	2,600	2,600	2,940	2,700	1842
Caradoc	4,612	3,898	4,762	4,012	5,230	3 880	.....
Delaware	2,178	1,439	2,549	1,599	2,674	1,687	....
Dorchester N.	3,622	3,471	3,752	3,705	4,056	3,887	...
Ekfrid	2,757	2,493	2,876	2,623	3,023	2,806	1820
Lobo	2,695	2,643	2,989	2,860	3,092	2,894	1856
Loudon	8,878	8,397	8,934	8,673	9,589	9,503	.....
McGillivray	3,151	2,862	3,503	3,025	4,178	3,685	.....
Metcalfe	1,562	1,516	1,699	1,633	2,192	2,195	.....
Mosa	2,206	2,476	2,450	2,759	2,673	2,790	1850
Nissouri W.	2,998	2,821	3,271	2,878	3,562	3,550	1851
Westminster	4,730	4,462	† 4,420	4,646	7,892	6,834	.....
Williams E.	1,587	1,376	1,794	1,657	2,195	1,881	.....
Williams W.	1,468	1,458	1,782	1,624	2,339	1,988	1860
Rural	46,940	43,641	49,997	46,654	58,753	53,260	.....
Ailea Craig Vill	744	708	731	699	872	838	1875
Glencoe	1,034	1,037	976	940	801	801	1876
Lucan	848	820	920	897	976	900	.....

* Included in Grimsby N. † Population decreased by annexing 3,261 to London city.

POPULATION.—*Continued.*

—	1901.		1891.		1881.		Date of municipal organization.
	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	
MIDDLESEX.—*Continued*:							
Newbury	454	450	452	414	546	547	1873
Wardsville	343	330	380	336	540	474	1867
Parkhill ..... Town	1,430	1,346	1,680	1,536	1,539	1,522	.....
Strathroy	2,933	2,903	3,316	3,216	3,817	3,640	.....
London ..... City	37,976	39,183	33,892	33,090	25,237	25,442	.....
Urban	45,762	46,777	42,347	41,128	34,328	34,164	.....
Total	92,702	90,418	92,344	87,782	93,081	87,424	.....
MUSKOKA:							
Brunel ..... Tp	811	774	1,728	635	1,604	624	1877
Cardwell	466	446	1,337	416	1,114	246	1878
Chaffey	1,136	1,033	980	803	.....	.....	1883
Draper	998	950	1,082	1,003	1,794	1,237	..
McLean and Ridout	762	715	735	670	756	700	1874
Macaulay	736	626	760	715	942	890	.....
Medora and Wood	1,116	909	921	863	1,116	675	.....
Monck	1,008	935	854	697	801	621	1869
Morrison	927	813	890	631	816	646	1865
Muskoka	838	799	797	706	1,135	828	1869
Oakley	348	336	385	364	*	*	1882
Ryde	552	576	612	570	*	623	1878
Stephenson	1,249	1,106	†	885	†	863	.....
Stisted	626	629	648	567	.....	.....	1882
Watt	975	946	‡	857	‡	755	1871
Unorganized	1,323	.....	1,496	.....	2,105	.....	.....
Rural	13,871	11,593	13,225	10,382	12,183	8,708	.....
Port Carling Vill	323	316	.....	.....	.....	.....	1896
Bracebridge ..... Town	2,479	2,310	1,419	1,216	1,193	1,127	1875
Gravenhurst	2,146	2,375	1,848	1,556	1,015	938	1878
Huntsville	2,152	2,021	1,159	1,436	§	.....	1886
Urban	7,100	7,022	4,426	4,208	2,208	2,065	.....
Total	20,971	18,615	17,651	14,590	14,391	10,773	.....
NIPISSING:							
Bonfield ..... Tp.	1,707	1,338	2,249	1,229	.....	.....	1887
Caldwell	868	853	.....	.....	.....	.....	1894
Calvin	509	455	549	411	.....	.....	1889
Cameron	487	166	242	112	.....	.....	1887
Dymond	698	372	.....	.....	.....	.....	1901
Ferris	962	795	**	329	.....	.....	1885
McKim	3,012	2,519	2,354	1,800	.....	.....	1890
Mattawan	328	259	694	248	.....	.....	1887
Papineau	670	593	††	366	.....	.....	1887
Ratter and Dunnett	774	890	..	.....	.....	.....	1897
Springer	1,305	1,016	1,480	830	.....	.....	1884
Widdifield	919	655	273	268	.....	.....	1885
Unorganized	6,564	.....	1,947	.....	2,090	.....	.....
Rural	18,803	9,911	9,788	5 593	2,090	.....	.....
Mattawa ..... Town	1,400	1,594	1,438	1,450	.....	.....	1884
North Bay	2,530	2,500	1,937	1,900	.....	.....	1891

United to Draper. † United with Brunel. ‡ United with Cardwell.

* Included with Draper. § In unorganized territory in 1881.

Including Harley, Hudson, Kerns and part of Harris. ** Included with Bonfield. †† Included with Mattawan.

POPULATION.—*Continued.*

	1901.		1891.		1881.		Date of municipal organization.
	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	
NIPISSING.—*Continued*:							
Sturgeon Falls	1,418	1,298	.....	.....	.....	.....	1896
Sudbury	2,027	1,795	.....	.....	.....	.....	1893
Urban	7,375	7,187	3,375	3,350	.....	.....	.....
Total	26,178	17,098	13,163	8,943	2,090	.....	.....
NORFOLK:							
Charlotteville Tp.	3,464	3,233	3,937	3,494	4,416	3,903	.....
Houghton	2,035	1,957	2,014	1,860	2,071	1,927	1851
Middleton	2,591	2,485	3,457	3,254	3,514	3,309	1850
Townsend	4,017	3,899	4,291	3,881	4,963	4,530	1849
Walsingham, N	2,359	2,095	4,785	2,295	5,819	4,966	.....
Walsingham, S	2,012	1,900	*	1,776	*	*	.....
Windham	3,884	3,649	4 252	4,023	4,913	4,296	.....
Woodhouse	2,379	2,000	2,508	2,262	2,922	2,600	.....
Rural	22,741	21,218	25,244	22,845	28,618	25,521	.....
Delhi Vill.	823	790	†	†	†	†	1894
Port Dover	1,177	1,145	1,213	1,146	1,146	1,065	1879
Port Rowan	657	725	649	600	‖	‖	1890
Waterford	1,122	1,043	1,212	1,168	1,118	1,110	1878
Simcoe Town.	2,627	3,007	2,674	3,103	2,645	2,498	.....
Urban	6,406	6,710	5,748	6,017	4,909	4,673	.....
Total	29,147	27,928	30,992	28,862	33,527	30,194	.....
NORTHUMBERLAND:							
Alnwick Tp.	1,247	991	1,321	1,079	1,471	1,220	1845
Brighton	2,774	2,434	3,017	2,879	3,470	2,849	1851
Cramahe	2,556	2,418	2,995	2,737	3,481	3,181	1850
Haldimand	3,946	3,862	4,484	4,116	5,401	5,185	.....
Hamilton	3,623	3,758	4,313	4,542	5,155	4,649	1826
Monaghan, S	929	855	1,093	1,078	1,148	1,072	.....
Murray	2,993	2,755	3,303	3,023	3,560	3,070	.....
Percy	3,216	2,907	3,388	3,048	3,768	3,529	1850
Seymour	3,261	3,042	3,509	3,109	3,783	3,293	.....
Rural	24,545	23,022	27,423	25,611	31,237	28,048	.....
Brighton Vill.	1,378	1,352	1,479	1,479	1,547	1,515	1858
Campbellford	2,485	2,504	2,424	2,435	1,418	1,355	1876
Colborne	1,017	1,023	1,068	1,033	1,079	974	1859
Hastings	815	803	812	793	885	802	1874
Cobourg Town	4,239	4,349	4,829	4,694	4,957	5,164	1837
Urban	9,934	10,031	10,612	10,434	9,886	9,810	....
Total	34,479	33,053	38,035	36,045	41,123	37,858	.....
ONTARIO:							
Brock Tp.	3,727	3,592	4,071	3,629	4,378	4,156	.....
Mara	2,921	2,931	3,152	2,980	3,237	2,940	1868
Pickering	5,225	5,211	5,998	5,781	6,883	6,035	1811
Rama	1,618	1,237	1,752	1,317	1,370	913	1869
Reach	3,589	3,439	4,190	4,122	4,949	4,385	1852
Scott	2,270	2,117	2,342	2,234	2,563	2,414	.....
Scugog	554	464	662	578	768	625	1856
Thorah	1,438	1,285	1,623	1,368	2,542	2,420	1849
Uxbridge	2,846	2,695	3,461	3,119	4,081	3,748	1849
Whitby, E	2,631	2,495	3,080	2,928	3,417	3,267	.....
Whitby	2,050	1,950	2,551	2,307	2,946	2,852	.....
Rural	28,869	27,416	32,882	30,363	37,134	33,755	.

* Included with Walsingham, N. † Taken out of Middleton and Windham Tps.
‖ Included in Walsingham.

POPULATION.—*Continued.*

—	1901.		1891.		1881.		Date of municipal organization.
	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	
ONTARIO.—*Con.*							
Beaverton . . . . . Vill.	855	746	850	850	*	*	1885
Cannington	1,058	1,172	1,060	1,101	922	903	1879
Port Perry	1,465	1,410	1,698	1,756	1,800	1,687	1873
Oshawa . . . . . Town	4,394	4,303	4,066	4,082	3,992	4,196	.....
Uxbridge	1,657	1,578	2,023	2,126	1,824	1,674	1873
Whitby	2,110	2,239	2,786	2,693	3,140	2,946	1854
Urban	11,539	11,448	12,473	12,608	11,678	11,406	.....
Total	40,408	38,864	45,355	42,971	48,812	45,161	.....
OXFORD:							
Blandford . . . . . Tp.	1,694	1,596	1,911	1,620	2,089	1,855	1836
Blenheim	4,679	4,186	5,606	4,704	5,937	5,086	1850
Dereham	3,979	3,585	4,025	3,580	4,486	3,976	1832
Nissouri, E	2,753	2,374	3,031	2,637	3,325	2,612	1850
Norwich, N	2,345	2,189	2,389	2,147	2,632	2,129	.....
Norwich, S	2,664	2,387	2,943	2,408	3,360	2,615	1856
Oxford, E	2,057	1,930	2,155	1,929	2,313	2,081	1848
Oxford, N	1,402	1,267	1,498	1,418	1,645	1,461	.....
Oxford, W	2,230	2,062	2,193	1,968	2,694	2,265	1856
Zorra, E	4,298	3,901	4,262	3,697	4,591	3,774	1850
Zorra, W	2,792	2,388	2,988	2,638	3,430	2,742	1840
Rural	30,893	27,865	33,001	28,746	36,502	30,594	.....
Embro . . . . . Vill.	595	590	627	565	616	510	1858
Norwich	1,269	1,397	1,255	1,200	1,411	1,316	1876
Ingersoll . . . . . Town	4,573	4,559	4,191	5,200	4,318	4,949	1852
Tillsonburg	2,241	2,117	2,163	2,207	1,939	1,827	1872
Woodstock . . . . . City	8,833	9,257	8,612	8,992	5,373	5,399	1851
Urban	17,511	17,920	16,848	18,164	13,657	14,001	.....
Total	48,404	45,785	49,849	46,910	50,159	44,595	.....
PARRY SOUND:							
Armour . . . . . Tp.	915	855	1,722	941	1,203	435	1881
Carling	377	296	.....	.....	.....	.....	1897
Chapman	694	750	1,301	852	.....	.....	1882
Christie	553	459	.....	.....	.....	.....	1894
Foley	618	503	502	355	2,025	563	1875
Hagerman	471	470	1,189	481	1,056	.....	1890
Himsworth, N	2,516	562	1,832	207	.....	.....	1886
Himsworth, S	†	1,518	†	1,095	.....	.....	1890
Humphrey	685	609	498	474	607	438	1874
Joly	268	280	836	256	.....	.....	1890
McDougall	503	474	355	311	‡	930	1875
McKellar	697	607	§	533	§	577	1874
McMurrich	716	613	724	633	.....	.....	1891
Macbar	902	805	1,177	721	.....	.....	1889
Nipissing	675	303	†	600	.....	.....	1888
Perry	1,779	1,224	1,704	1,052	.....	.....	1888
Ryerson	761	743	¶	641	¶	532	1880
Strong	768	719	‖	688	.....	.....	1884
Unorganized	6,948	.....	4,232	.....	7,922	.....	.....
Rural	20,846	11,790	16,072	9,840	12,813	3,475	.....
Burk's Falls . . . . . Vill.	849	764	449	413	.....	.....	1890
Sundridge	357	470	664	750	.....	.....	1890
Parry Sound . . . . . Town.	2,884	2,628	1,982	1,736	.....	.....	1887

* Included in Thorah Tp. in 1881.

† Included with Himsworth, N. ¶ Included with Armour. ‡Included with Foley. § Included with Hagerman ‖ Included with Joly.

POPULATION.—*Continued.*

	1901.		1891.		1881.		
	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Date of municipal organization.
PARRY SOUND.—*Con.*							
Urban	4,090	3,862	3,095	2,899	....	....	.....
Total	24,936	15,652	19,167	12,739	17,813	3,475	....
PEEL:							
Albion.....Tp.	2,741	2,715	3,142	2,782	3,872	3,189	.....
Caledon	4,345	3,880	5,520	4,175	5,310	3,568	.....
Chinguacousy	4,177	3,853	4,744	4,487	5,476	5,005	.....
Toronto	5,208	4,967	5,528	5,129	5,873	5,343	1850
Toronto Gore	1,032	956	1,247	1,103	1,363	1,245	1850
Rural	17,503	16,371	20,181	17,676	21,894	18,350	.....
Bolton.....Vill.	702	635	743	653	606	560	1872
Streetsville	522	533	695	557	755	655	1858
Brampton.....Town.	2,748	2,813	3,252	3,294	2,920	2,966	1852
Urban	3,972	3,981	4,690	4,504	4,281	4,181	.....
Total	21,475	20,352	24,871	22,180	26,175	22,531	.....
PERTH:							
Blanshard.....Tp.	2,575	2,518	2,927	2,828	3,244	2,967	.....
Downie	2,895	2,704	3,281	2,927	3,489	2,928	1842
Easthope, N.	2,295	2,012	2,551	2,494	2,722	2,390	1843
Easthope, S.	2,097	1,875	2,149	1,672	2,244	1,829	.....
Ellice	3,367	2,761	3,384	2,913	3,275	2,804	1842
Elma	4,159	3,598	4,231	3,973	4,421	3,752	1857
Fullarton	2,295	2,150	2,511	2,351	2,708	2,469	.....
Hibbert	2,400	2,005	2,636	2,252	3,394	3,130	.....
Logan	3,024	2,772	3,093	2,726	3,355	2,813	1857
Mornington	3,246	2,966	3,509	3,224	3,998	3,586	.....
Wallace	2,839	2,780	3,237	2,891	3,655	2,979	1858
Rural	31,192	28,141	33,509	30,251	36,505	31,647	.....
Milverton.....Vill.	698	703	603	533	562	669	1881
Listowel.....Town.	2,693	2,597	2,587	2,520	2,688	2,462	1867
Mitchell	1,945	1,954	2,101	2,202	2,284	2,377	.....
St. Marys	3,384	3,410	3,416	3,494	3,415	3,432	1864
Stratford.....City.	9,959	10,451	9,500	9,417	8,239	8,954	.....
Urban	18,679	19,115	18,207	18,166	17,188	17,894	.....
Total	49,871	47,256	51,716	48,417	53,693	49,541	.....
PETERBOROUGH:							
Asphodel.....Tp.	1,877	1,767	1,866	1,722	1,918	1,687	.....
Belmont and Methuen	2,382	1,953	2,807	2,304	1,965	1,643	1834
Burleigh and Anstruther	687	692	1,520	1,290	1,381	1,307	1866
Chandos	806	778	*	*	*	*	1894
Douro	1,871	2,020	2,131	1,980	1,872	1,562	1840
Dummer	2,039	1,857	2,143	2,005	2,149	2,012	.....
Ennismore	936	807	932	877	1,137	1,033	.....
Galway and Cavendish	853	1,130	804	676	787	716	1860
Harvey	1,199	1,095	1,155	1,000	1,114	934	1860
Monaghan, N.	957	911	1,021	851	912	740	.....
Otonabee	3,456	3,249	3,652	3,521	4,013	3,739	1850
Smith	2,944	2,589	3,045	2,640	3,301	2,732	1850
Rural	20,007	18,848	21,076	18,866	20,549	18,405	.....
Ashburnham.....Vill.	1,647	1,747	1,674	1,583	1,266	1,299	1859
Havelock	984	975	†	†	†	†	1893
Lakefield	1,244	1,159	1,120	1,092	992	987	1875

* United with Burleigh and Anstruther. † Included in Belmont.

POPULATION.—*Continued.*

—	1901.		1891.		1881.		Date of municipal organization.
	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	
PETERBOROUGH.—*Con.*							
Norwood	945	920	1,010	982	853	767	1878
Peterborough .....Town.	11,239	10,985	9,717	9,841	6,812	6,752	1850
Urban	16,059	15,786	13,521	13,498	9,923	9,805	.....
Total	36,066	34,634	34,597	32,364	30,472	28,210	.....
PRESCOTT:							
Alfred.....Tp.	3,327	3,025	3,053	2,822	3,208	2,454	.....
Caledonia	2,201	1,771	1,943	1,570	1,751	1,440	.....
Hawkesbury, E.	4,621	4,813	4,896	4,516	5,082	3,898	1800
Hawkesbury, W.	1,350	1,162	2,740	2,473	2,360	1,888	.....
Longueuil	1,060	912	1,172	978	1,162	984	.....
Plantagenet, N.	4,082	4,116	4,245	3,569	3,997	3,446	.....
Plantagenet, S.	3,544	3,365	3,080	2,391	2,524	2,192	.....
Rural	20,185	19,164	21,129	18,318	20,084	16,302	.....
L'Orignal.....Vill.	1,026	1,083	1,002	779	853	764	1876
Hawkesbury .....Town.	4,150	3,802	2,042	1,557	1,920	1,457	1857
Vankleek Hill	1,674	1,289	*	*	*	*	1897
Urban	6,850	6,174	3,044	2,336	2,773	2,221	.....
Total	27,035	25,338	24,173	20,654	22,857	18,523	.....
PRINCE EDWARD:							
Ameliasburg.....Tp.	2,585	2,903	3,079	2,896	3,451	3,084	.....
Athol	1,187	1,110	1,284	1,080	1,573	1,384	1849
Hallowell	3,445	2,846	3,380	3,042	3,704	3,217	.....
Hillier	1,647	1,501	1,890	1,626	2,192	1,842	1850
Marysburg N.	1,213	1,219	1,430	1,350	1,700	1,548	1850
Marysburg S.	1,342	1,177	1,643	1,591	2,205	1,886	1870
Sophiasburg	2,095	1,728	2,341	2,071	2,646	2,200	.....
Rural	13,514	12,484	15,047	13,656	17,471	15,161	.....
Wellington.....Vill	652	580	555	525	598	537	1862
Picton .....Town	3,698	3,640	3,287	3,060	2,975	2,833	183
Urban	4,350	4,220	3,842	3,585	3,573	3,370	.....
Total	17,864	16,704	18,889	17,241	21,044	18,531	.....
RAINY RIVER:							
†Alberton .....Tp.	183	193	.....	234	.....	.....	1891
‡Chapple	.....	344	.....	.....	.....	.....	1899
§Emo	1,321	485	.....	.....	.....	.....	1899
Keewatin	1,156	933	1,416	629	.....	.....	1888
‖McIrvine	1,163	386	.....	.....	.....	.....	1898
Van Horne	741	246	.....	.....	.....	.....	1899
Unorganized	7,723	.....	3,638	.....	.....	.....	.....
Rural	12,287	2,587	5,054	863	.....	.....	.....
Rat Portage .....Urban	5,202	4,797	1,806	2,205	.....	.....	1885
Total	17,489	7,384	6,860	3,068	.....	.....	.....
RENFREW:							
Admaston .....Tp.	2,453	2,243	2 548	2,126	2,383	2,126	.....
Algona S.	1,080	939	1,025	692	759	662	1867
Alice and Fraser	2,139	1,978	1,920	1,742	1,912	1,607	1848
Bagot and Blithfield	1,620	1,397	1,594	1,241	1,126	952	.....

* Included in Hawkesbury Township.
† Alberton comprises Crozier and Roddick. ¶ Not specified in census. ‡ Chapple comprises Barwick, Shenstone, Dobie and Rosberry. § Comprises Carpenter, Lash and Aylesworth.
‖ McIrvine includes Fort Frances.

POPULATION.—*Continued.*

—	1901.		1891.		1881.		Date of municipal organization.
	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	
RENFREW.—*Continued*:							
Bromley	2,069	2,025	1,933	1,773	1,797	1,623	.....
Brougham	601	568	548	549	574	490	.....
Brudenell and Lyndoch	1,411	1,417	1,398	1,338	1,270	1,185	1861
Grattan	2,078	1,992	1,724	1,578	1,893	1,523	1858
Griffith and Matawatchan	697	720	721	681	614	569	.....
Hagarty, Jones, etc	3,456	2,828	2,200	2,111	1,417	1,210	.....
Head, Clara and Maria	483	364	521	373	953	391	.....
Horton	1,557	1,316	1,608	1,419	1,510	1,262	.....
McNab	3,835	3,445	3,514	3,254	3,092	2,984	.....
Pembroke	903	622	801	622	683	630	.....
Petewawa and McKay	1,067	994	991	928	689	547	.....
Radcliffe and Raglan	1,364	1,185	1,059	925	785	619	1878
Rolph, Buchanan & Wylie	1,140	1,029	1,034	736	699	577	.....
Ross	2,269	2,254	2,402	2,457	2,131	2,080	.....
Sebastopol	731	725	710	674	626	572	.....
Stafford	1,174	1,097	1,173	1,000	1,055	973	.....
Westmeath	3,586	3,420	3,612	3,005	3,220	2,614	.....
Wilberforce and Algona N.	2,700	2,338	2,877	2,164	2,406	2,002	.....
Rural	38,413	34,895	35,913	31,388	31,594	27,198	.....
Cobden.....Vill	734	638	*	*	*	*	1901
Eganville	1,107	1,056	710	750	†	†	1891
Arnprior.....Town	4,152	3,837	3,341	3,116	2,147	1,948	.....
Pembroke	5,156	5,131	4,401	4,277	2,820	2,804	1858
Renfrew	3,153	3,268	2,611	2,200	1,605	1,483	.....
Urban	14,302	13,930	11,063	10,343	6,572	6,235	.....
Total	52,715	48,825	46,976	41,731	38,166	33,433	.....
RUSSELL:							
Cambridge.....Tp.	3,459	3,147	2,767	2,424	1,676	1,471	.....
Clarence	6,085	5,203	4,779	4,187	4,411	4,059	.....
Cumberland	4,198	3,790	4,014	3,367	3,535	2,509	1845
Russell	3,835	2,958	3,918	2,902	3,458	2,833	.....
Rural	17,577	15,098	15,478	12,880	13,080	10,872	.....
Casselman.....Vill	707	479	1,346	1,179	‡	†	1889
Rockland	1,998	1,638	1,465	1,407	§	§	1887
Urban	2,705	2,117	2,811	2,586	.....	.....	.....
Total	20,282	17,215	18,289	15,466	13,080	10,872	.....
SIMCOE							
Adjala.....Tp	2,161	2,087	2,459	1,899	2,885	2,210	.....
Essa	3,438	4,150	3,592	3,950	4,666	3,826	.....
Flos	3,897	3,353	3,782	3,038	3,141	2,383	.....
Gwillimbury W	2,342	2,196	2,525	2,323	2,994	2,871	1850
Innisfil	3,858	3,526	5,110	4,191	5,499	4,624	1843
Matchedash	499	439	375	363	3,097	2,354	1888
Medonte	4,451	3,917	4,514	3,453	3,632	2,755	1850
Nottawasaga	5,342	5,252	6,060	4,949	6,971	5,339	.....
Orillia	4,564	3,663	3,687	3,158	¶	¶	1866
Oro	4,001	3,880	4,357	3,819	4,566	4,119	.....
Sunnidale	2,367	1,933	2,772	2,293	2,802	2,628	1860
Tay	5,442	4,545	4,714	3,775	2,993	1,904	1869
Tecumseth	3,440	3 009	3 863	3,194	5,325	4,390	.....
Tiny	4,386	3,896	4,784	3,818	3,736	2,832	1851

* Included in Ross Tp. † Included in Grattan and Wilberforce Tps. in 1881.
‡ Included in Cambridge Tp. § Included in Clarence Tp. in 1881. ¶ United with Matchedash.

POPULATION.—*Continued.*

	1901.		1891.		1881.		Date of municipal organization.
	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	
SIMCOE.—*Continued*:							
Tossorontio	1,726	1,557	1,870	1,456	1,921	1,223	.....
Vespra	2,830	2,990	3,022	2,813	2,879	2,548	1854
Rural	54,744	50,393	57,486	48,522	57,107	46,006	.....
Beeton.....Vill	634	726	771	767	*	*	1886
Bradford	984	997	996	925	1,176	1,025	1858
Creemore	654	645	721	648	†	†	1890
Tottenham	611	562	586	531	*	*	1885
Alliston.....Town	1,256	1,374	1,371	1,951	1,099	985	1875
Barrie	5,949	6,067	5,550	5,274	4,854	4,611	1853
Collingwood	5,755	5,878	4,939	5,008	4,445	41,34	1858
Midland	3,174	3,040	2,088	2,198	1,095	953	1878
Orillia	4,907	4,863	4,752	4,854	2,910	2,900	.....
Penetanguishene	2,422	2,718	2,110	2,125	1,089	980	1877
Stayner	1,225	1,204	1,357	1,123	1,028	1,008	1874
Urban	27,571	28,074	25,241	25,404	17,696	16,596	.....
Total	82,315	78,467	82,727	73,926	74,803	62,602	.....
STORMONT:							
Cornwall.....Tp	6,911	5,594	6,790	5,629	5,436	3,580	.....
Finch	3,765	2,942	3,509	3,024	3,493	3,035	.....
Osnabruck	4,828	4,706	5,316	4,769	5,796	4,856	.....
Roxborough	4,834	4,274	4,736	4,153	4,005	3,727	.....
Rural	20,338	17,516	20,351	17,575	18 730	15,198	.....
Cornwall.....(Urban)	6,704	6,243	6,805	6,010	4,468	4,190	1847
Total	27,042	23,759	27,156	23,585	23,198	19,388	.....
THUNDER BAY:							
‡Neebing.....Tp	403	218	2,176	838	.....	.....	1885
Oliver	504	413	427	385	.....	163	1881
Shuniah	22	151	.....	107	.....	.....	1884
Schreiber	510	378	.....	.....	.....	.....	1901
Unorganized	1,659	.....	1,928	.....	4,926	.....	....
Rural	3,098	1,160	4,531	1,330	4,926	163	.....
Fort William.....Town	3,997	4,093	.....	.....	.....	.....	1892
Port Arthur	3,214	3,148	2,698	3,158	.....	.....	1884
Urban	7,211	7,241	2,698	3,158	.....	.....	.....
Total	10,309	8,401	7,229	4,488	4,926	163	.....
VICTORIA:							
Bexley.....Tp	907	871	902	723	903	844	.....
Carden	805	690	815	720	916	995	1862
Dalton	541	509	509	528	530	§	1887
Eldon	2,994	2,723	3,145	2,814	3,778	3,008	.....
Emily	2,304	1,938	2,603	2,211	2,876	2,382	.....
Fenelon	2,470	2,221	2,809	2,550	3,094	2,811	1850
Laxton, Digby & Longford	815	720	874	759	957	796	1854
Mariposa	4,190	3,795	4,849	4,044	5,531	5,216	.....
Ops	2,610	2,176	2,926	2,544	3,358	2,804	1841
Somerville	2,105	1,865	1,940	1,787	1,509	1,359	.....
Verulam	2,130	1,800	2,291	1,943	2,474	2,195	.....
Rural	21,871	19,308	23,663	20,623	25,926	22,410	.....

* Included in Tecumseth Tp. in 1881. † Included in Nottawasaga in 1881.
‡ Neebing is composed of Neebing, Paipoonge, Blake, Crooks and Pardee. § United with Carden.

POPULATION.—*Continued.*

—	1901.		1891.		1881.		Date of municipal organization.
	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Dominion census	Municipal assessment.	
VICTORIA —*Continued*:							
Bobcaygeon Vill	914	891	1,018	984	750	710	1877
Fenelon Falls	1,132	1,204	1,219	1,044	1,155	1,017	1875
Omemee	574	610	687	690	744	689	1874
Sturgeon Point.....	*	369	*	*	*	*	1899
Woodville	458	513	323	655	†	†	1884
Lindsay .....Town	7,003	6,929	6,081	6,157	5,080	5,365	1857
Urban	10,081	10,516	9,328	9,530	7,729	7,781	.....
Total	31,952	29,824	32,991	30,153	33,655	30,191	... ..
WATERLOO:							
Dumfries N ....Tp	2,164	1,994	2,516	2,468	3,848	3,583	1848
Waterloo.....	7,107	7,063	7,344	6,905	7,594	6,997	1850
Wellesley	5,051	4,740	5,609	5,188	5,752	4,778	.....
Wilmot	4,944	4,938	5,487	5,226	5,358	4,888	.. .
Woolwich	4,318	4,197	4,838	4,462	5,524	5,193	1850
Rural	23,584	22,932	25,794	24,249	28,076	25,439	.....
Ayr Vill	827	846	1,040	980	‡	‡	1884
Elmira	1,060	1,084	1,069	988			1887
New Hamburg	1,208	1,201	1,335	1,250	1,240	1,151	1868
Berlin .....Town	9,747	9,914	7,425	7,443	4,054	4,079	1854
Galt	7,866	7,985	7,535	7,374	5,187	4,983	1857
Hespeler	2,457	2,398	1,482	1,374	698	642	1858
Preston	2,308	2,249	1,843	1,838	1,419	1,305	1852
Waterloo.....	3,537	3,574	2,941	2,853	2,066	2,012	.....
Urban	29,010	29,251	24,670	24,100	14,664	14,172	.....
Total	52,594	52,183	50,464	48,349	42,740	39,611	.....
WELLAND:							
Bertie .. ..Tp	3,189	2,891	4,222	3,836	3,986	3,460	1807
Crowland	1,010	819	1,107	994	1,318	1,185	1850
Humberstone.	3,232	2,866	2,842	2,599	4,182	3,298	.....
Pelham	2,490	2,336	2,554	2,342	2,623	2,406	....
Stamford.....	2,140	1,902	2,099	2,025	3,162	2,836	1793
Thorold	2,025	1,895	2,316	2,009	2,456	2,502	1799
Wainfleet	3,008	2,704	2,945	2,327	2,996	2,331	1850
Willoughby	991	926	1,099	1,041	1,273	1,024	1796
Rural.....	18,085	16,339	19,184	17,173	21,996	19,042	.....
Bridgeburg Vill	1,356	1,311	¶	¶	¶	¶	1895
Chippawa.....	460	459	523	519	664	631	1849
Fort Erie	890	820	934	913	722	600	1857
Niagara Falls South	1,458	1,413	1,179	1,107	‖	‖	1882
Port Colborne.....	1,253	1,257	1,154	1,025	1,716	1,520	... ..
Niagara Falls.....Town	4,244	4,498	3,349	2,905	2,347	2,200	1856
Thorold	1,979	2,211	2,273	2,401	2,456	2,471	.....
Welland	1,863	1,944	2,035	1,858	1,870	1,876	.....
Urban	13,503	13,913	11,447	10,728	9,775	9,298	....
Total	31,588	30,252	30,631	27,901	31,771	28,340	.....
WELLINGTON:							
Arthur ....Tp	2,961	2,830	3,224	3,220	3,916	3,554	1860
Eramosa	2,705	2,566	3,116	2,867	3,611	3,391	1829
Erin	3,587	3,368	4,048	3,560	4,644	3,952	.. ....
Garafraxa W.....	2,561	2,305	3,043	2,631	3,620	3,216	1869

* Formerly in with Fenelon and Verulam Tps. † Included in Eldon Tp. ‡ Included in Dumfries N. Tp. in 1881 § Included in Woolwich Tp. in 1881. ¶ Included in Bertie Tp. ‖ Included in Stamford Tp.

POPULATION.—*Continued.*

	1901.		1891.		1881.		
	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Date of municipal organization.
WELLINGTON.—*Continued*:							
Guelph	2,423	2,236	2,464	2,277	2,793	2,823	.. ..
Luther W	2,227	2,068	2,044	1,892	1,790	1,561	.....
Maryborough	3,188	2,999	3,546	3,069	4,551	3,669	1851
Minto	3,128	2,994	3 637	3,271	4,443	3 919	1856
Nichol	1,685	1,691	2,056	1,973	2,474	2,157	.... .
Peel	3,865	3,842	4,253	4,200	5,024	4,382	.....
Pilkington	1,491	1,353	1,663	1,561	1,958	1,792	.....
Puslinch	3,045	2,739	3,614	3,331	3,985	3,258	.....
Rural	32,866	30,991	36,708	33,852	42,809	37,674	.....
Arthur Vill.	1,285	1,278	1,296	1,246	1,257	1,265	1872
Clifford	608	593	634	561	722	664	1874
Drayton	791	759	793	758	587	789	1875
Elora	1,187	1,187	1,304	1,228	1,387	1,390	1858
Erin	511	490	594	542	477	406	1881
Fergus	1,396	1,437	1,598	1,532	1,733	1,732	1858
Harriston Town	1,637	1,675	1,687	1,645	1,772	1,712	.....
Mount Forest	2,019	2,184	2,214	2,304	2,170	2,194	.....
Palmerston	1,850	1,777	2,006	1,654	1,828	1,743	1875
Guelph City	11,496	11,271	10,537	10,695	9,890	10,057	.....
Urban	22,780	22,651	22,663	22,165	21,823	21,952	.....
Total	55,646	53 642	59,371	56,017	64,632	59,626	.....
WENTWORTH:							
Ancaster To.	3,863	3,612	4,098	3,895	4,726	4,465	1850
Barton	3,620	3,539	3,269	4,676	3,525	3,270	....
Beverly	3,999	3,837	4,636	4,550	5,230	5,100	1850
Binbrook	1,403	1,229	1,674	1,569	1,814	1,643	.....
Flamboro, E	2,522	2,428	2,961	2,448	2,746	2,432	.....
Flamboro, W	2,822	2,715	3,079	2,878	3,461	3,364	1850
Glanford	1,585	1,490	1,744	1,643	1,977	1,847	.....
Saltfleet	3,209	3,110	2,765	2,634	2,951	2,587	1850
Rural	23,023	21,960	23,926	24,293	26,430	24,708	.....
Waterdown Vill.	622	567	669	669	852	754	1879
Dundas Town	3,173	3,212	3,546	3,385	3,709	3,668	1847
Hamilton City	52,634	53,781	48,973	46,794	35,961	36,946	1847
Urban	56,429	57,560	53,188	50,848	40,522	41,368	.....
Total	79,452	79,520	77,114	75,141	66,952	66,076	.....
YORK:							
Etobicoke Tp.	4,413	3,481	4,557	3,579	2,976	2,728	1850
Georgina	1,808	1,629	1,990	1,707	2,482	2,232	.....
Gwillimbury, E	3,570	3,166	3,844	3,553	4,143	3,892	1836
Gwillimbury, N	1,827	1,244	1,990	1,695	2,151	1,953	.....
King	5,565	5,128	6,067	5,375	6,664	5,655	1809
Markham	5,378	5,278	5,681	4,956	6,375	5,600	.....
Scarborough	3,845	3,576	4,028	3,864	4,208	4,082	1850
Vaughan	4,586	4,215	5,292	4,490	6,828	5,230	.....
Whitchurch	3,619	3,464	4,019	3,702	4,529	4,117	1850
York	11,192	8,965	*8,357	6,453	12,748	10,939	1793
Rural	45,803	40,146	45,825	39.374	53,104	46,428	.....
East Toronto Vill.	1,564	1,524	1,975	910	†	†	1888
Holland Landing	446	452	443	430	580	553	1861
Markham	967	1,163	1,100	1,019	954	949	1873
Richmond Hill	629	594	743	750	867	797	1873

* Census gives 23,257, but this includes the corporations of East Toronto, North Toronto and Toronto Junction, estimated at 8,105 and 6,795 within the limits of City of Toronto. †Included in York Tp. in 1881.

POPULATION.—*Continued.*

	1901.		1891.		1881.		Date of municipal organization.
	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	
YORK.—*Continued :*							
Stouffville	1,223	1,202	1,148	1,128	866	805	1877
Sutton	646	593	686	631	†	†	1891
Weston	1,083	1,075	1,194	1,109	*	*	1882
Woodbridge	604	626	762	782	‡	‡	1882
Aurora.....Town	1,590	1,576	1,743	1,922	1,540	1,480	1863
Newmarket	2,128	2,366	2,143	1,948	2,006	1,704	.....
North Toronto	1,852	1,830	1,612	1,191	*	*	1890
Toronto Junction	6,091	6,038	4,158	4,158	*	*	1888
Toronto.....City	208,040	205,887	181,209	170,951	93,196	83,874	1834
Urban	226,860	224,926	199,276	186,929	100,009	90,163	.....
Total	272,663	265,072	245,101	226,303	153,113	136,591	.....

SUMMARY OF TOTAL POPULATION WITHIN COUNTY LIMITS.

Algoma	34,583	17,973	16,973	7,035	10,628	1,920	.....
Brant	38,140	33,483	36,445	34,222	33,869	29,762	.....
Bruce	59,020	54,554	64,603	57,950	65,218	56,407	.....
Carleton	96,904	94,265	77,630	73,282	64,104	57,765	.....
Dufferin	21,036	22,053	22,311	20,159	22,093	19,060	.....
Dundas	19,757	18,450	20,132	18,753	20,598	17,707	.....
Durham	27,570	26,193	32,427	30,872	36,265	33,817	.....
Elgin	43,586	40,755	43,377	39,868	42,361	39,050	.....
Essex	58,516	56,804	55,340	51,157	46,962	41,520	.....
Frontenac	44,534	39,558	47,009	40,475	42,384	36,887	.....
Glengarry	22,131	20,036	22,447	20,113	22,221	18,395	.....
Grenville	21,021	19,227	21,609	19,441	22,741	19,603	.....
Grey	69,590	65,306	71,214	66,278	70,539	62,520	.....
Haldimand	21,233	19,989	23,440	20,683	24,980	21,708	.....
Haliburton	6,559	5,963	6,350	5,767	5,911	5,216	.....
Halton	19,545	19,040	21,982	20,208	21,919	21,070	.....
Hastings	59,291	55,322	59,084	54,906	55,061	48,540	.....
Huron	61,820	59,610	66,781	61,272	76,526	67,535	.....
Kent	57,422	52,983	58,076	52,236	54,310	47,031	.....
Lambton	56,642	52,130	58,753	53,181	52,034	45,595	.....
Lanark	37,232	36,143	37,725	35,274	33,975	30,660	.....

* Included in York Tp. in 1881. † Included in Georgina Tp. ‡ Included in Vaughan Tp.

POPULATION.—*Concluded.*

—	1901.		1891.		1881.		Date of municipal organization.
	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	Dominion census.	Municipal assessment.	
THE PROVINCE.—*Continued:*							
Leeds	37,975	34,690	39,279	35,793	38,434	34,182	.....
Lennox and Addington	23,346	22,174	24,750	22,866	26,484	22,853	.....
Lincoln	30,552	29,824	30,079	28,826	31,573	30,040	.....
Manitoulin	11,359	6,123	10,794	5,678	8,460	2,682	.....
Middlesex	92,702	90,418	92,344	87,782	93,081	87,424	.....
Muskoka	20,971	18,615	17,651	14,590	14,391	10,773	.....
Nipissing	26,178	17,098	13,163	8,943	2,090	.....	.....
Norfolk	29,147	27,928	30,992	28,862	33,527	30,194	.....
Northumberland	34,479	33,053	38,035	36,045	41,123	37,858	.....
Ontario	40,408	38,864	45,355	42,971	48,812	45,161	.....
Oxford	48,404	45,785	49,849	46,910	50,159	44,595	.....
Parry Sound	24,936	15,652	19,167	12,739	12,813	3,475	.....
Peel	21,475	20,352	24,871	22,180	26,175	22,531	.....
Perth	49,871	47,256	51,716	48,417	53,693	49,541	.....
Peterborough	36,066	34,634	34,597	32,364	30,472	28,210	.....
Prescott	27,035	25,338	24,173	20,654	22,857	18,523	.....
Prince Edward	17,864	16,704	18,889	17,241	21,044	18,531	.....
Rainy River	17,489	7,384	6,860	3,068	.....	.....	.....
Renfrew	52,715	48,825	46,976	41,731	38,166	33,433	.....
Russell	20,232	17,215	18,289	15,466	13,080	10,872	.....
Simcoe	82,315	78,467	82,727	73,926	74,803	62,602	.....
Stormont	27,042	23,759	27,156	23,585	23,198	19,388	.....
Thunder Bay	10 309	8,401	7,229	4,488	4,926	163	.....
Victoria	31,952	29,824	32,991	30,153	33,655	30,191	.....
Waterloo	52,594	52,183	50,464	48,349	42,740	39,611	.....
Welland	31,588	30,252	30,631	27,901	31,771	28,340	.....
Wellington	55,646	53,642	59,371	56,017	64,632	59,626	.....
Wentworth	79,452	79,520	77,114	75,141	66,952	66,076	.....
York	272,663	265,072	245,101	226,303	153,113	136,591	.....
Rural	1,246,610	1,092,181	1,282,981	1,116,347	1,346,623	1,134,192	.....
Urban	936,337	936,708	831,340	805,774	580,299	561,042	.....
Total	2,182,947	2,028,889	2,114,321	1,922,121	1,926,922	1,695,234	.....

MUNICIPAL EXEMPTIONS.

Statement showing by municipalities the "exemptions from general rates by by-law but subject to school rate" for the year 1901.

NOTE.—These are entirely exclusive of statutory exemptions, but a few are given as still in force in which the by-laws exempted from all taxes. The returns show many cases of "fixed" assessments, but the information in all cases does not show the extent of the exemption. Besides the list given below, many towns exempt "farm lands" from certain taxes, such as street lighting, sidewalks, etc.

TOWNSHIPS.	Exempt except for schools.	Exempt for all purposes.	Description.
	$	$	
Alberton, Rainy River	600		
Aldborough, Elgin	2,000		Roller mill (for 10 years).
Assiginack, Manitoulin	1,800		
Barton, Wentworth	2,000		
Billings, Manitoulin	1,750		Mill property.
Boofield, Nipissing		5,560	
Brunel, Muskoka	1,000		
Burpee, Manitoulin	900		
Carling, Parry Sound	4,600		
Carnarvon, Manitoulin	1,000		Mill (10 years).
Chapman, Parry Sound	1,000		Grist mill.
Clinton, Lincoln	3,300		Brick Co.
Cockburn Island, Manitoulin	500		
Eastnor, Bruce	7,500		Two grist mills.
Faraday, Hastings	1,333		Roller grist mill.
Gloucester, Carleton	1,000		Grist mill.
Grimsby S., Lincoln	4,009		T. H. & B. R.R. & Cheese Co.
Hilton, Algoma	1,250		
Himsworth N., Parry Sound		7,500	This exempt'n expired in 1901
Huron, Bruce	1,300		Flax mill.
Keppel, Grey	40,000		
King, York	53,500		Metropolitan R.R. Co.
Lochiel, Glengarry		3,000	Alexandria Power House.
Mayo, Hastings	400		
Normanby, Grey	550		
Orillia, Simcoe	15,000		Shingle mill, exempt from [township rate only.
Petewawa, Renfrew	696		
Ratter and Dunnett, Nipissing	5,185		
Rayside, Algoma	2,500		Mill.
Sandwich W., Essex	4,340		M.C.R.R. (20 years).
Sarawak, Grey	10,750		Cement Co. & canning fact'ry
Sheffield, Lennox	1,500		
Springer, Nipissing	1,800		
Wainfleet, Welland	4,000		
Walpole, Haldimand	2,600		
Whitchurch, York	8,400		Metropolitan R.R. Co. (10 yrs)
Zorra E., Oxford	6,000		Mill Co.
VILLAGES.			
Acton, Halton	11,000		
Athens, Leeds	2,350		
Beamsville, Lincoln	2,000		
Beeton, Simcoe	10,500		
Belle River, Essex	2,050		
Blyth, Huron		5,100	Exempted $100 per year.
Brussels, Huron	2,850		Electric light plant.
Burk's Falls, Parry Sound	30,855		Taxes exempt amount to $438
Burlington, Halton	4,000		
Cardinal, Grenville	60,000		Starch Co.
Chesley, Bruce	13,450		
Cobden, Renfrew	1,800		
Drayton, Wellington	3,500		
Dundalk, Grey	2,700		
Elmira, Waterloo	15,800		Felt Co. & agricultural works
Exeter, Huron	6,000		Also $2,500 from village rate.
Fenelon Falls, Victoria	2,000	9,400	An $11,400 property fixed at [$2,000 for school taxes.
Fergus, Wellington	3,500		
Glencoe, Middlesex	5,500		
Havelock, Peterborough	3,500		
Kemptville, Grenville	15,000		Milling Co.
Lakefield, Peterborough	49,200		The Dickson Co. and Cement
Lanark, Lanark	4,000		Flour mill. [Co. (10 yrs.)
Lucknow, Bruce	6,000		Furniture Co.
Markham, York	8,500		Also farm lands.
Newburg, Lennox & Addington	2,000		
New Hamburg, Waterloo		6,500	
Niagara Falls South, Welland	5,311		Electric car line (non-resident)
Norwich, Oxford	7,800		Broom, vinegar & evaporator
Norwood, Peterborough	900		Foundry (10 years).
Ottawa East, Carleton	45,496		

Paisley, Bruce	4,000		
Port Dalhousie, Lincoln	100,000		
Port Elgin, Bruce	7,500	.....	Brush factory and foundry.
Southampton, Bruce	15,000		
Springfield, Elgin	3,000	.....	Mill property (for 10 years).
Sundridge, Parry Sound	3,000	.....	Box factory.
Tilbury, Kent	1,200		
Tweed, Hastings	1,000		
Watford, Lambton	1,200		
TOWNS.			
Barrie, Simcoe	22,500	.....	Conditionally.
Berlin, Waterloo	131,400	.....	One firm pays fixed tax of $25 and another pays $50.
Bowmanville, Durham	26 300		
Brampton, Peel	16,000		
Brockville, Leeds	11,275	.....	Also two factories assessed for $57,500 pay fixed taxes $620
Cobourg, Northumberland	127,500	.....	Crosson Co., Dick-Ridout Co. and Matting factory.
Collingwood, Simcoe	35,000	.....	Ship Co., Meat Co. & Tannery
Dundas, Wentworth	25.200	7,800	Canada Can Works exempt for all purposes.
Dunnville, Haldimand	39,250	.....	Six industries.
Durham, Grey	10,000	.....	Furniture Co.
Forest, Lambton	5,500	.....	Flour mill (expires in 1903).
Fort William, Thunder Bay	25,000		
Galt, Waterloo	60,700		
Gananoque, Leeds	.....	9,000	
Goderich, Huron	126,500		
Gore Bay, Manitoulin	900	.....	Waterworks pipe and planing [mill.
Harriston, Wellington	39,500		
Hawkesbury, Prescott	10,000	.....	Lumber mill estimated value $250,000, assessed at $35,000
Kincardine, Bruce	19,400	.....	Three factories; also farm [lands.
Kingsville, Essex	17,000		
Leamington, Essex	6,850		
Lindsay, Victoria	56,225	59,500	G. T R. fixed at $30,000.
Listowel, Perth	18,000	.....	Furniture Co.
Little Current, Manitoulin	7,000		
Meaford, Grey	79,200		
Midland, Simcoe	.....	.....	Five properties have a fixed assessment of $126,000.
Milton, Halton	8,500	.....	Shoe factory & carpet factory
Napanee, Lennox & Addington	6,600		
Newmarket, York	13,100	.....	Office Specialty Co. & Metro-
Niagara, Lincoln	2,500	.....	Canning Co. [politan R.R.
Niagara Falls, Welland	38,400		
Oakville, Halton	3,500		
Orangeville, Dufferin	1,100	.....	Personal property was almost abolished owing to the adoption of the "business tax."
Oshawa, Ontario	16,000	.....	Three factories assessed for $73,000 pay a fixed tax of $655
Owen Sound, Grey	87,000	.....	C. P. R. assessment fixed at
Palmerston, Wellington	40,500		[$100,000 for 20 years.
Paris, Brant	36,690		
Parry Sound, Parry Sound	9,500		
Penetanguishene, Simcoe	38,950	.....	Five have a further assessment
Perth, Lanark	29,000		[of $15,300 for all taxation.
Peterborough, Peterborough	238,940	.....	Fixed assessment of eleven
Petrolea, Lambton	5,000		[properties.
Port Arthur, Thunder Bay	79,027	.....	C. P. R. assessment fixed at
Port Hope, Durham	29,000	.....	[$50,000 for all purposes.
Prescott, Grenville	41,400	101,000	
Sandwich, Essex	4,500		
Sarnia, Lambton	63,000	.....	Six properties also have a fixed assessment of $159,375
Sault Ste. Marie, Algoma	72,100	.....	Also Power Co. assessed at
Seaforth, Huron	4,000		[$750,000 pays fixed school
Sturgeon Falls, Nipissing	2,300		[tax of $5,000.
Thessalon, Algoma	10,500		
Toronto Junction, York	217,275		
Trenton, Hastings	91,750		
Walkerton, Bruce	106,960	.....	Rattan furniture and binder
Walkerville, Essex	32,645		[twine works.
Wallaceburg, Kent	24,000		
Whitby, Ontario	15,700	.....	Also, farm lands.
Wiarton, Bruce	21,200		
Wingham, Huron	15,000		Conditional; also farm lands.
CITIES.			
Belleville, Hastings	15,000		
Brantford, Brant	680,100		
Guelph, Wellington	45,000		
Hamilton, Wentworth	1,294,500		
Kingston, Frontenac	326,953	176,147	
London, Middlesex	109,000	249,000	
St. Catharines, Lincoln	228,900		
Toronto, York	*2,081,162		
Windsor, Essex	51,600		Salt Co., Bent Goods Co. and Gas Co.
Woodstock, Oxford	94,000		

* All machinery, plant and tools used in every manufacturing establishment in the City of Toronto are exempt from taxation except for school rates.

NOTE. – Except for exemptions for all purposes, these amounts are included in the assessed values of the municipalities given on pages 54 to 101.

SECOND REPORT

OF

THE BUREAU OF LABOR

OF THE

PROVINCE OF ONTARIO

FOR

THE YEAR ENDING DECEMBER 31st

1901

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY

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SECOND REPORT

OF

THE BUREAU OF LABOR

1901.

To the Honorable F. R. Latchford,
Commissioner of Public Works, Ontario.

Sir,—I have the honor to submit herewith the Second Report of the Bureau of Labor.

I have the honor to be, Sir,

Your obedient servant,

R. GLOCKLING,
Secretary.

INTRODUCTION.

The interest necessary to the full success of the Ontario Bureau of Labor has not yet fully awakened. We feel justified, however, in asserting that the work in this direction that has been accomplished during the year just closed (the second of the Bureau's existence) has been of a character that leads to that desired success referred to.

In my first report I took occasion to say that "there is a misconception in the public mind as to the purpose of the Bureau, the object of its creation, its methods of work, and the useful purpose which it can be made to serve. This can only be removed by arduous and careful work, with which there can be no doubt it will receive full recognition, and in time be accorded its proper place in public appreciation."

That the misconception exists has been more than demonstrated by the visits of the Secretary of the Bureau to the industrial centres of the Province during the year. In preparing the plans of operation for collecting and publishing statistics and information for our second annual report, the Bureau has used much the same methods as last year; some few changes were made in the system of question blanks.

Th experience of last year in gathering the desired information by means of the mails was found to be inadequate for the purpose, and this is the experience of other bureaus, which have at their inception used this method, until, one by one, they have had, in course of time, to adopt the special agent method of collection.

In August of the present year the attention of the Hon. the Commissioner of Public Works was drawn to the unsatisfactory results in returns to the Bureau of schedules sent out for information, and permission was sought by the Secretary to visit the industrial centres, with a view of stimulating interest in assistance to the Bureau in the collection of data, and this course was approved by the Hon. the Commissioner. In nearly all cases but little argument sufficed to remove misapprehension as to the purposes of the Bureau prevalent among many of the newly organized bodies.

In many instances neglect of those deputed by the organizations to forward the returns was the cause of their non-receipt by the Bureau. The result of these visits was that about one-half of the organizations have made returns that promised much less before the visits were made. The fact was demonstrated in our Province, as it has been in other places, that personal application is the sure way of getting full information, and of ensuring correct understanding.

The collection of industrial statistics from the manufacturers of the Province was but fair. With time, full confidence will be established in the impartiality of the Labor Bureau.

FREE EMPLOYMENT OFFICES.

The quesion of free employment offices has been given some attention. The Bureau has received considerable correspondence on this subject. It is one that is receiving much consideration in most civilized countries, many of which have adopted this adjnnct to Government.

RECENT LEGAL DECISIONS AFFECTING LABOR.

The recent legal decisions affecting labor rendered in the Province of Ontario, which have been compiled from the Labor Gazette, will be much appreciated, I am snre, by the workers of the Province.

STRIKES AND LOCK-OUTS.

Returns of strikes and lockouts show a desirable diminution for the period from September 1st, 1900, to August 31st, 1901, compared with a like previous period. The total number of strikes reported being 19, and one lock-out, involving 64 establishments, and covering an aggregate of 438 days, or an average of 23 days to each. The greater number required but a few days for settlement. The tendency to settle disputes between employers and employees by conciliation or arbitration is rapidly on the increase, not only in Ontario, but in other parts of the world, as the various reports from different countries indicate.

THE VALUE AND INFLUENCE OF LABOR STATISTICS.[1]

By Carroll D. Wright.

There are now in the United States, besides the Federal Department of Labor thirty-one State bureaus or departments devoted to the collection of statistics of labor by means of original investigations. Besides these, the Federal Census Office, the Bureaus of Statistics of the Federal Treasury and Agricultural Departments, the Bureau of Foreign Commerce of the Department of State, the departments and boards of agriculture of the various States, and various other offices may be considered as publishing labor statistics in some degree. But I speak here of the value and influence of those offices first mentioned—those devoted specifically and technically to the investigation of social and industrial conditions and to the publication of distinctive labor statisics. These offices had their foundation in the establishment of the Massachusetts bureau in 1869. Gradually other States created bureaus of statistics of labor, and in 1884 the United States government added its own office to those already in existence. All the offices, together, have published over 400 octavo volumes, covering a great variety of topics and the results of investigations relative to almost every condition and environment of the workingman.

The character and quality of the work of the different offices varies in some degree, due to a considerable extent to the short tenure of the heads of the different bureaus. Where the Governor of a State has allowed himself to ignore politics and insist upon scientific work, the bureaus have achieved the greatest success; but as a rule a governor feels that the office of the chief of the bureau of statistics of labor of his State must be filled by somebody from his party, without reference to the skill, the experience, or the integrity of the incumbent under the previous administration. Yet I am glad to say, as the result of pretty careful study of the reports of all the officials who have done duty in this country during the past thirty-two years, that no matter for what reason they were appointed, no matter how inexperienced in the work of investigation and of compilation and presentation of statistical matter, no matter from what party they came, and whether in sympathy with capital or with labor, and even if holding fairly radical socialistic views—the men have, almost without exception, at once comprehended the sacredness of the duty assigned them, and have served the public faithfully and honestly, being content to collect and publish facts without regard to their individual bias or their individual political sentiments. As soon as a man realizes that he is giving to the world a fact, he feels the necessity of accuracy, and that to distort the information collected would be to commit a crime worse than any ordinary lying, because it would mislead legislators and others and fix a falsehood in the history of the State. Many men, too, have come into the work of the statistical bureaus feeling that they could use them as the means of propagandism in some way, and in a few cases this has been attempted, but almost always with failure, because bureaus are looked to to furnish information relative to actual conditions surrounding industry.

That what I have said is true is illustratel by other countries following the example of the American States. Great Britain, France, Belgium, Austria, New Zealand, New South Wales, Canada, and the Province of Ontario, Canada, have established bureaus following in their duties very closely those assigned by law to the American bureaus and departments. In Germany, Italy, and Sweden labor statistics of the same character are published by general statistical bureaus. A distinguished member of the House of Commons of England told me a few years ago that, whenever he wished to lay any facts relative to workingmen before his colleagues, he carried into the House some American report on the statistics of labor. In the Chamber of Deputies of France, in the German Reichstag, and in the legislative bodies of other countries the American labor reports have been freely used in economic discussions. Had not the work of the American offices been highly regarded, these things would not have occurred. It is true, of course, that the sentiment of the times is largely conducive to the successful operation of bu-

reaus of statistics of labor. The general attention paid to social and industrial conditions and all conditions affecting the environment of men has fitted the soil for statistical seed. The altruistic spirit of this age calls for accurate information, that it may know how best to expend its efforts and not dissipate its energy. The question is constantly being asked: "What do social classes owe to each other?" and that any one class may not be deceived in the nature or magnitude of its debt, it must turn to statistics to ascertain the true situation.

The question is often asked, and by very intelligent people, Of what good is a bureau of statistics of labor? Does the workingman secure any direct benefits from its existence? This question cannot be answered very specifically, any more than could one asking for the direct benefits of the public school. It would be a difficult process to show how a dollar more is made to enter the pockets of the working people through the existence of the public schools, or any other educational institution, and yet all men will admit that the sum of benefits is largely increased by the existence of schools. Personally, I have always contended that the bureau of statistics of labor, wherever it exists, is simply a part of the educational machinery established by the community through which it is enabled to know more of itself. "Know thyself" is an injunction which should be applied to communities as well as to individuals, and it is only through rigid, impartial, and fearless investigations that any community can know itself in many directions. Notwithstanding this general view of the educaional influence of the offices I am considering, very many instances of their specific influence can be cited. These instances I must, for purposes of convenience, draw largely from those which have come under my own observation or within my knowledge, for to enter upon a research of all the influences which have come in direct ways from the services of all the offices in existence in this country would take me too far afield.

One of the first results that I remember, as being traceable to a published report, related to the tenement-house-system of the city of Boston. In the second, third and fourth reports of the Massachusetts Bureau of Statistics of Labor there were many facts showing the condition of the tenement-houses in the city named. The public was fully apprised of the misery that existed in them ,resulting from bad conditions, ill construction, and all that tended to make tenement-house life an evil. Public attention was aroused through these publications, better laws were framed and passed, and a public sentiment created which crystallized in a reform movement having for its purpose the improvement of tenement-houses in Boston. Some of the worst places were improved, and the impetus then given is still active, as is shown by the existence of societies in that city and their influence in securing from the legislature an appropriation to enable the bureau in that State to make a very exhausive investigation covering every tenement of whatever grade in the city of Boston.

The bureaus everywhere, whenever conditions warranted it, have investigated the subject of child labor and shown to the public all the facts connected with such employment, the evils it entailed upon the community, and the methods which could be resorted to for its reduction, and everywhere, too, the results have been beneficial. If the bureaus had never accomplished anything else than the marked reductions in the number of young children—those under ten years of age—who are employed in factories and workshops, they would have amply repaid the public for its expenditure in their equipment and support.

The publication of information relative to the inspection of factories and workshops in England and other countries, together with statistics showing the necessity for such inspection in this country, has led in several States to the establishment of boards of factory inspectors. These boards have committed to them the execution of all laws providing in any way for the benefit of those who have to work in any kind of productive establishments. These inspectors enforce the laws concerning the hours of labor, the employment of women and children, the guarding of machinery so that the operatives may be more free from accidents, and in all ways undertake the enforcement of all laws of the character specified. Through these efforts (and they were largely induced by the reports of labor statistics) child labor has decreased, accidents have been

reduced in number and severity, the hours of labor have been shortened and recognized, and so all along that line of facts the influence of the reports of the bureaus has been enormous; the value of their statistics cannot be expressed by figures.

The first ten-hour law in this country was passed by the Massachusetts legislature in 1874. The statistics published by the bureau of that State helped the passage of the law in a marked degree, and saved its repeal in later years. The manufacturers, finding that they were brought under the ten-hour law so far as minors and women were concerned, felt that the manufacturers in surrounding States ought to be brought under like laws or the law of Massachusetts should be repealed, for they claimed, as was claimed in England years ago, that in working under a ten-hour law the manufacturers of Massachusetts were placed at a decided disadvantage relative to the manufacturers in the surrounding States. The legislature therefore directed the Bureau of Statistics of Labor to investigate the subject of the hours of labor in that State and in the other New England States. The result of the investigation showed that under a ten-hour system, the Massachusetts manufacturers paid more wages than those in the other States, where eleven and twelve hours were the rule; that they produced more goods on any basis that could be named, whether per individual or per machine; in short, that in every respect the Massachusetts operatives were under better conditions than those of the Surrounding States. Thre has been no attempt since that report was published to repeal the ten-hour law of Massachusetts. On the other hand, other States have followed suit, until now that sysem prevails generally in the United States.

The bureaus have been verv influential in securing a modification of the old common-law rule relating to the liability of employers for accidents occurring to their employees. Under this rule a workman cannot recover damages for injuries received through the carelessness or negligence of a co-employee, although a stranger might recover damages for an injury following the same carelessness or negligence; as, for instance, under the old common-law rule, a brakeman on a train running perhaps 500 miles could secure no damages from a railroad corporation in consequence of injuries received through the carelessness or negligence of a switchman along any part of the line, although the brakeman knew nothing of the switchman, had no knowledge of his skill or capacity when he engaged with the company, and in no sense of the word, so far as reason is concerned, could be considered the co-employee of the switchman; yet, although that common-law rule grew up before great industrial enterprises were established, judges had adhered to it, and had ruled that in such a case as that just mentioned the switchman and the brakeman were co-employees, and therefore the employer could not be held liable. The agitation for a legislative change in this common-law rule in England resulted in the enactment of a law in 1880 changing or modifying the rule, and, in this country, the matter being taken up by the bureaus of statistics of labor, several legislatures have been convinced of the justice of a change, and have therefore made it; the dire results which were predicted as sure to follow the change of the rule have not followed. In this direction the bureaus have done a great service, not only to the employees of railroads and corporations engaged in productive industry, but in securing the public against the employment of incompetent men.

Another very emphatic influence which the bureaus have exercised is in the abolishment or modification of what is known as the "truck-store" system, or, as it is more popularly known in some parts of the country, the "pluck-me" method of store trading. This system consists in the establishment of a store by the proprietors of a works for the supply of its employees. Formerly, in many instances, the prices charged at these stores were much higher than those charged at other places, and so the employee of a concern having a truck store was almost compelled, and in many instances actually compelled, to purchase the necessaries of life for his family at an exorbitant price, whereby the employer made a second profit on the labor of the employee. In very many instances the workmen of such an establishment never saw any money from one year's end to another. The pay for the goods purchased in the store was secured by the payrolls, and the debts and credits left no margin on pay-day. Early in the existence of bureaus of statistics of labor this system was attacked through the statistical

method, and the result has been that in very many States laws have been passed making it a criminal offence, in some cases, to carry on such a system, and in other cases making it the duty of the proper officers to see to it that they are regulated. The evils of the truck-store system have not yet been entirely eradicated in this country, but the change has been great, and the value to the wage receiver of the greatest importance.

In this connection I might mention the influence which the bureaus have had in securing more frequent payments for the workingman. Formerly the payments were monthly. Under this system the credit system grew also because without ready money the wage receiver must secure credit of his grocer, and the grocer, under such circumstances, looks out that the charges are sufficient to cover the delay in receiving his money or the losses which may come through his endeavors later on to collect the amount of his bill of the employer through the trustee or the garnishee system. Weekly payments have been shown by various bureaus to be beneficial in eradicating some of the evils of the credit system.

In some of the Western States there have grown up during the past few years some of the most rascally practices on the credulity of the workingman that have ever been known. They are robberies of the meanest sort, for they not only rob a man of his money, but in many instances of his manhood. The practice I refer to is that of a certain class of employment offices, located usually in the rear of some beer saloon, which advertise that a large number of men are wanted for labor in a certain city, but almost always at a distance. In a western city one of these offices advertised for one thousand men to proceed immediately to Washington, D.C., where employment would be furnished at $1 per day. Hundreds of men responded to this advertisement. They were obliged to pay down $3 or $4, as the case might be, or as the rascality of the manager might demand, and then the men were put off by various excuses for several days, until they began to clamor for their contract. When they became too demonstrative, the manager would pay back a part of the sum advanced, for the sake of integrity. Meantime, however, these hundreds of men, loafing about his beer-saloon, had expended more or less money for beer, in addition to the fee paid for the supposed employment. In one city an advertisement appeared for a large number of men to be shipped to Iowa, while in Iowa an advertisement appeared for a large number of men to be shipped to the very place of the first call. The bureaus in some of the States where such practices have been carried on collected the information relative to these offices, and exposed the swindle perpetrated upon the wage receiver. Much good was derived from these reports, and, in addition to the laws in existence, others of a more stringent nature followed.

These instances of the direct influence and value of bureaus of statistics of labor are sufficient, it seems to me, to prove beyond any question their right to exist, their right to the sympathy and support of the public, and their right to ample equipment and means for carrying on their beneficent work. But they have another office to perform, which is one of the leading offices of statistics in every direction, and that is the correction of false impressions and the removal of apprehension, and two or three instances of this kind may perhaps be of service.

The statement is usually made by writers on the labor question from the capitalistic point of view that the prosperity of the savings-banks of the country represents absolutely the prosperity of the working man—that the toal amount of savings in such banks clearly indicates the prosperity of labor. I am not disposed to question this statement, so far as it applies as a principle, but I question the degree of accuracy contained in it, for the investigations have clearly shown that only about one-half of the deposits in the savings-banks belong to men and women engaged in manual labor or in the toil necessary to the production of goods. Such a fact, properly brought out, simply sets peoples' thoughts in the right direction, although it does not disprove the sentiment underlying the erroneous statements regarding the conditions involved.

In 1878 a great deal was said about the unemployed in this country. It was reported, and the report was very industriously circulated, that there were from 200,000

to 300,000 people out of employment in Massachusetts, 40,000 in he city of Boston alone, and 3,000,000 in the United States. These figures were quoted in newspapers works on political ecenomy, speeches in Congress, political resolutions, etc., until they came to be believed everywhere, and yet no attempt was made, officially or otherwise, to ascertain the real facts. The Bureau of Statistics of Labor of Massachusetts undertook to make an investigation of the subject, and this it did at two separate canvasses, one in June, 1878, and the other in November of the same year. The result showed that in that Commonwealth, on June 1, there were 28,508 skilled and unskilled laborers, male and female, out of employment, seeking and in want of work, and that in November there were not more than 23,000 of the same class. On this basis, there could not have been over 460,000 unemployed able-bodied men and women in the United States, ordinarily having work, out of employment at the time mentioned. The report further showed that in the Sate mentioned there were in 1875 only 316,459 persons engaged in manufactures and mechanical industries, in occupations upon which they depended for support, whether actually employed or not, and the whole number actually employed in the manufacturing and mechanical pursuits of the State was 308,963. If, therefore, there had been 200.000 or 300,000 persons out of employment in the State in June, 1878, as the alarmists were in the habit of stating, there could have been hardly any left in the factories and workshops of the community. The figures published by the report were used all over the country, and completely reversed the popular belief relative to the vast numbr of the alleged unemployed in the country.

But I think one of the most striking instances of the removal of false impressions from the public mind relates to mortgage indebtedness on real estate. In a speech made in Congress, in May, 1888, the statement was quoted from an agricultural paper that the estimated mortgage indebtedness of all real estate in Ohio at that time was $701,000,000; in Indiana, $398,000,000; in Illinois, $620,000,000; in Wisconsin, $250,000,000; in Michigan, $350,000,000; in Iowa, $351,000,000; and statements were made for other States. The Ohio and Michigan Bureaus of Statistics of Labor undertook to investigate this subject through the offices of the registers of deeds, the boards of assessors, etc., and in these two States the mortgage indebtedness, as established and estimated by the Commissioners of Labor, was for Ohio, $330,999,205, and for Michigan, $129,229,553, instead of the amounts popularly claimed. Under the Federal census of 1890 an investigation was made relative to mortgage indebtedness, and the facts established with remarkable accuracy for the other States just named. By the investigation of the census it was shown that in Indiana the mortgage indebtedness is $110,730,643; in Illinois, $384,299,150; in Wisconsin, $121,838,168; and in Iowa, $199,774,171. It is a little remarkable that the sums accepted in a popular way for the mortgage indebtedness of the States named were in some instances exactly the valuation of all the property of the State. The extravagant figures quoted were used all over this country and in Europe, wherever capitalists were seeking investment in this country. The figures did immense harm; the wrong cannot be calculated; but as time goes on the statistics emanating from bureaus of statistics of labor and from the Census Office are removing the apprehension which grew out of the original statements.

Another feature relative to mortgages relates to the causes for which mortgages are placed upon farms in the western country. It has been claimed in recent years that the great mortgage indebtedness of Western States is due largely to disaster or adversity. The Commissioner of Labor of Nebraska undertook to satisfy himself by positive investigation, as to the truth or falsity of such claims, and he took as the territory for his investigation the county of Sarpy, covering the period from December 31 ,1879, to January 1, 1890. Sarpy is one of the oldest counties in Nebraska, and it therefore offered the best opportunities for investigation in that State. The result, as to the causes for the creation of the mortgage indebtedness of the county, is shown in the following statement, taken from Commissioner Jenkins's report for 1889-90:

Purchase money	58.00 per cent
Permanent improvements	3.00 per cent
Purchase of stock	4.00 per cent
To meet personal obligations	.50 per cent
To invest in real estate	7.00 per cent
To invest in mercantile business	20.00 per cent
Sickness	.25 per cent
Unknown causes	7.25 per cent

Allowing that all the mortgages from sickness and from unknown causes were the result of misfortune or of adversity of some kind, the foregoing table shows that 92½ per cent. were for legitimate causes, and such causes as indicated prosperity rather than adversity.

The investigation under the eleventh United States census comprehends the object of indebtedness for 102 selected counties in several States, the results being obtained by personal inquiry through the experts of the office. The investigation is a clear and emphatic corroboration of the results arrived at by Commissioner Jenkins of Nebraska. It shows that to legitimate objects, indicating clearly prosperity and advancement, 94.37 per cent. of all the mortgage indebedness of 102 counties considered must be attributed.

The convict labor question is one that has attracted a great deal of attention during the last quarer of a century, but it was not until various State bureaus and the United States Deparment of Labor collected exhaustive statistics relative to productive employments in penitentiaries and other penal institutions and showed the effect of different systems of employing convicts that the discussion took intelligent shape. There has been much reform along the lines of convict labor. Many States have made experiments which have been abandoned, while others have established new systems which are progressing favorably; in the whole work the contributions of labor statistics have been of the greatest possible value.

The advancement of technical science, too, has been greatly accelerated by the exhaustive publications of different departments and bureaus of statistics of labor relative to industrial education. It is only recently that the different States of the Union have felt it incumbent upon them, through their legislatures, to study all the phases of industrial training, consisting of manual training, trade school instruction, and the higher technological or university work which is done in our institutes of technology. The United States Bureau of Education has aided the discussion and consideration of such matters, and its work has been grandly supplemented by the State bureaus and the United States Department of Labor. It is now possible to discuss the question of industrial education in all its phases not only inelligently, but on the basis of practical experience in this and other countries.

These few instances show the enormous value of statistics in removing apprehension and in correcting erroneous views. The money value of such information is not easy to calculate.

In September, 1883, the heads of the few bureaus of statistics of labor then existing met at Columbus, Ohio, and organized the National Convention of Chiefs and Commissioners of Bureaus of Statistics of Labor. Since then these officials have met annually for the purpose of discussing statistical methods and the best way of collecting information and of tabulating, analyzing, and presenting it. It was one of the early dreams of the founders of this convention that some uniform contemporaneous work could be undertaken by all the bureaus in co-operation, but this dream was fraught with many difficulties. States did not organize their bureaus at the same time. Many of the subjects which had been covered by those organized at early dates formed the subjects of investigation of those which had been established at later dates,

and hence there was a conflict; for the earlier bureaus did not wish to cover again what was new and important to the more recently established ones. Another difficulty arose in the fact that the industries and conditions of one State were not common to all States having bureaus of statistics of labor. Notwithstanding the fact that the original idea has not been and cannot be carried out, the convention has been of the greatest possible value to the different States. At each annual meeting each Commissioner of Labor reports the investigations he has in hand, the methods he has adopted for obtaining the information desired, and all the difficulties and complications attending his work. These matters are then discussed and the experience of older Commissioners brought out for the benefit of those who have more recently come into the work of gathering statistics of labor. Thus great advantage is given to even the older Commissioners to gain fresh inspiration from the troubles and difficulties of those who are new to the work. The convention also helps to call public attention not only to the value but to the methods of the work being conducted.

Notwithstanding all that I have said relative to the value and influence of the statistics of labor, I am perfectly well aware that they could be made of far greater value; but that greater value can only be secured through the direct action of the legislative bodies behind the bureaus. They are very poorly equipped. They need more men and more money. They need experience, which can only come through the influence of the executives of the States. With a longer tenure of office and an increase in the equipment and means of the bureaus, their future usefulness can be made to far excel that of the past and of the present. The lines of work which they can undertake are numerous and inexhaustible. Knowledge of production is absolutely essential for the adjustment of many of the difficult questions we are facing today, and any contribution, through statistical investigation or otherwise, that will enable both the capitalist and his employee to more clearly understand the real conditions of production should be welcomed by all elements of the community. The bureaus must be kept in the future, as in the past, from from partizanship. The statistician is not a statistician when he is an advocate, no matter how skillful he may be in the manipulation of figures. He must be impartial, he must make his investigations without any reference to theories to be proved or disproved, and give to the world the actual results of his inquiries. This country lacks trained statisticians. We have no means for training them, except in the practical work of the statistical offices of the State and federal governments. These offices, therefore, become a school for the future, and the statisticians of this country that are to be of great service to the governments must acquire their knowledge through the statistical offices; but no work can be accomplished successfully without money and without men. We must look, therefore, to the legislative branches of our various governments for the increase of the usefulness and for recognized influence of our bureaus of statistics of labor.

LIST OF BUREAUS OF LABOR STATISTICS.

That the utility and general value of accurate statistics in those branches of a nation's wealth, comprising subjects of mechanical and manual labor, is recognized by most civilized countries, is evidenced by the following list of existing labor bureaus, compiled from official records.

Ontario.—The Bureau of Labor was created by an Act passed by the Ontario Legislature, April 25th, 1900, under the direction of the Hon. F. R. Latchford, Commissioner of Public Works. R. Glockling, secretary of the Bureau of Labor.

Canada.—The department of Labor was established in July, 1900, and practically supersedes the Bureau of Labor of the Department of Agriculture established in 1890, with Mr. George Johnson as chief clerk. The department is under the direction of the Minister of Labor, the Hon. William Mulock. The Act establishing the department provides for the monthly issuing of a Labor Gazette, the editor of which is W. L. Mackenzie King, B.A., Deputy Minister of Labor. The first number of The Gazette was issued in September, 1900.

Great Britain.—The Labor Bureau of the Board of Trade was established March 2nd, 1886. In 1893 the service was greatly enlarged and given its present name, "Board of Trade Labor Department." H. Llewllyn Smith, chief secretary. It publishes monthly The Labor Gazette; also annual reports.

New Zealand Department of Labor.—The Right Hon. R. J. Seddon, Minister of Labor. E. Tregear, secretary, Wellington, N. Z.

New South Wales.—Department of Labor and Industry. T. B. Clegg, chief clerk, Sydney, N. S. W.

Queensland Department of Immigration.—Government Labor Bureau and Relief. Chief clerk, J. O'Neil Brenan, Brisbane, Queensland.

South Australia Labor Bureau. Chief clerk, A. C. H. Richardson, Adelaide, South Australia.

United States Department of Labor.—Established as a Bureau of Labor, January 31st, 1885; made a Department of Labor, June 13th, 1888. Bi-monthly bulletins. Annual reports. Commissioner of Labor, Carroll D. Wright, Washington, D.C.

Masachusetts Bureau of Statistics of Labor.—Established June 23rd, 1869. Quarterly bulletins. Annual reports. Chief of the Bureau of Statistics of Labor, Horace G. Wadlin, Boston, Mass.

Pennsylvania Bureau of Industrial Statistics.—Established April 12th, 1872. Annual reports. Chief of Bureau of Industrial Statistics, James M. Clark, Harrisburg, Pa.

Connecticut Bureau of Labor Statistics.—Established July 12th, 1873. Abolished July 23rd, 1875. Re-established April 23rd, 1885. Annual reports. Commissioner of Labor, Harry E. Back, Hartford, Conn.

Kentucky Bureau of Agriculture, Labor and Statistics.—First established March 20th, 1876, as a Bureau of Agriculture, Horticulture and Statistics; the duties of the Bureau were enlarged and present name adopted April 2nd, 1892. Biennial reports. Commissioner of Agriculture, Labor and Statistics, Lucas Moore, Frankfort, Ky.

Missouri Bureau of Labor Statistics and Inspection.—Established March 19th, 1879; enlarged March 23rd, 1883. Annual reports. Commissioner of Labor, Wm. Anderson, Jefferson City, Mo.

Ohio Bureau of Labor Statistics.—Established May 5th, 1877. Annual reports. Commissioner of Labor, M. D. Ratchford, Columbus, Ohio.

New Jersey Bureau of Statistics of Labor and Industries.—Established March 27th, 1878. Annual reports. Chief of the Bureau of Statistics of Labor and Industries, William Stainsby, Trenton, N.J.

Illinois Bureau of Labor Statistics.—Established May 29th, 1879. Biennial reports. Secretary of the Bureau of Labor Statistics, David Ross, Springfield, Ill.

Indiana Bureau of Statistics.—Established March 29th, 1879. Biennial reports. Chief of the Bureau of Statistics, B. F. Johnson, Indianapolis, Ind.

New York Bureau of Labor Statistics.—Established May 4th, 1883. Annual reports. Commissioner of Labor, John McMackin, Albany, N. Y.

California Bureau of Labor Statistics.—Established March 3rd, 1883. Biennial reports. Commissioner of Labor, F. V. Myers, San Francisco, Cal.

Michigan Bureau of Labor and Industrial Statistics.—Established June 6th, 1883. Annual reports. Commissioner of Labor, Scott Griswold, Lansing, Mich.

Wisconsin Bureau of Labor Statistics.—Established April 3rd, 1883. Biennial reports. Commissioner of Labor, Halford, Erickson, Madison, Wis.

Iowa Bureau of Labor Statistics.—Established April 3rd, 1884. Biennial reports. Commissioner of Labor, C. F. Wennerstrum, Des Moines, Iowa.

Maryland Bureau of Industrial Statistics.—Established March 27th, 1884. Annual reports. Chief of the Bureau of Industrial Statistics, Thomas A. Smith. Baltimore, Md.

Kansas Bureau of Labor Statistics.—Established March 5th, 1885. Annual reports. Commissioner of Labor, W. L. A. Johnson, Topeka, Kan.

Rhode Island Bureau of Labor Statistics.—Established March 29th, 1887. Annual reports. Commissioner of Labor, Henry E. Tiepke, Providence, R. I.

Nebraska Bureau of Labor and Industrial Statistics.—Established March 31st, 1887. Biennial reports. The Governor, ex-officio Commissioner. Deputy Commissioner of Labor and Industrial Statistics, C. E. Watson, Lincoln, Neb.

North Carolina Bureau of Labor Statistics.—Established February 28th, 1887. Annual reports. Commissioner of Labor, Henry B. Varner, Raleigh, N. C.

Maine Bureau of Labor Statistics.—Established March 7th, 1887. Annual reports. Commissioner of Labor, Samuel W. Matthews, Augusta, Maine.

Minnesota Bureau of Labor.—Established as a Bureau of Labor Statistics, March 8th, 1887; enlarged and changed to a Bureau of Labor, April, 1893. Biennial reports. Commissioner of Labor, John O'Donnell, St. Paul, Minn.

Colorado Bureau of Labor Statistics.—Established March 24th, 1887. Biennial reports. Commissioner of Labor, James T. Smith, Denver, Col.

West Virginia Bureau of Labor.—Established February 22nd, 1889. Annual reports. Commissioner of Labor, I. V. Barton, Wheeling, W. Va.

North Dakota Department of Agriculture and Labor.—Established October 1st, 1890. Biennial reports. Commissioner of Labor, H. U. Thomas, Bismarck, N. D.

Tennessee Bureau of Labor Statistics and Mines.—Established March 23rd, 1891. Annual reports. Commissioner of Labor, R. A. Shiflett, Nashville, Tenn.

Montana Bureau of Agriculture, Labor and Industry.—Established February 17th, 1893. Annual reports. Commissioner of Labor, J. A. Ferguson, Helena, Mont.

New Hampshire Bureau of Labor.—Established March 30th, 1893. Biennial reports. Commissioner of Labor, Lysander H. Carroll, Concord, N. H.

Washington Bureau of Labor.—Established June 11th, 1897. Annual reports. Commissioner of Labor, Wm. Blackman, Olympia, Wash.

Idaho.—Commissioner of Labor, J. A. Czizek, Boise City, Idaho.

Argentine Republic.—Francois Latzina, Directeur General de la Statistique de la Republique Argentina (Ministere de l'Interieur), Buenos Ayres.

Austria-Hungary—Commission Central of Statistics (Minister of Public Instruction). Dr. Karl Theodor von Inama Sternegg, President, Vienna. Department of Municipal Statistics, Dr. Sedlatzek, Chief, Vienna.

Bavaria.—Royal Bureau of Statistics (Department of the Interior). Karl Rasp, Director, Munich.

Belgium.—Royal Bureau of General Statistics (Minister of the Department of the Interior and Public Instruction). Edmund Nicoall, Chief, Brussels.

Brazil.—Dr. R. Pompeia, Directeur de Bureau de Statistique des Etats Unis du Bresil (Ministere de l'Interieur), Rio Janeiro.

Bulgaria.—Bureau of Statistics of Bulgaria (Minister of Public Instruction). F. Ivantchoff, Director, Sophia.

Chili.—Don Francisco S. Asta Buruaga, Chef du Bureau Central de Statistique du Chili, Santiago.

Denmark.—Royal Bureau of Statistics (Minister of Finance). Marius de Gad, Director, Copenhagen.

France.—Office du Travail (Ministere du Commerce et de l'Industrie). C. Moron, Directeur, Paris.

Victor Furquan, Chef du Bureau de la Statistique General de France (Ministere du Commerce et de l'Industrie—Office du Travail) Paris.

Germany.—Imperial Office of Statistics (Department of Interior), Dr. F. W. Hans von Scheel, Director, Berlin.

Herzegovina.—Bureau of Statistics of Bosnia and Herzegovina. Dr. Ferdinand, Schmid, Director, Sarajevo.

Italy—Luiai Bodio, Directeur General de la Statistique du Royaume (Ministere de l'Agriculture, de l'Industrie et du Commerce), Rome.

Japan.—S. Ishibashi, Chef du Bureau General de Statisque (Cahinet Imperial), Tokio.

Mexico.—Antonio Penafiel, Directeur General de la Statistique de la Republique (Mexicaine du Fomento), Mexico.

Paraquay.—I. Jasquet, Directeur General de la Statistiane du Paraquay, Assumption.

Portugal.—Ernesto Maderia Pinto, Director General of Statistics of Commerce (Minister of Public Works, or Commerce and Industries), Lisbon.

Prussia.—Royal Bureau of Statistics (Minister of the Department of the Interior). Karl Julius Emil Blenck, Director, Berlin.

Office of Statistics of the City of Berlin. Dr. Richard Bockh, Director, Berlin.

Roumania.—C. E. Curpenski, Directeur de la Statistique General du Rouaume (Ministere de l'Agriculture, de l'Industrie, du Commerce et des Domaines), Bucharest.

Russia.—Nicholas Troinitsky, Directeur du Comite Central de Statistique (Ministere de l'Interieur), St. Petersburg.

B. Grigorier, Chef du Bureau de la Statistiane Munlcipale, Moscow.

Saxony.—Bureau of Statistics of the Minister of State. Dr. Victor Bohmert, Director, Dresden.

Spain.—Ing. Francisco de Paula de Arrillaga, Director General of the Geographic Institute and Bureau of Statics of Spain, Madrid.

Styria.—Bureau of Statistics of Styria. Dr. Ernest Meschler, Director, Gratz.

Sweden and Norway.—Dr. Elis Sidenbladh, Directeur en Chef du Bureau Central de Statistique du Royaume (Ministere de l'Interieur), Stockholm.

Anders Nicoali Kiaer, Director du Bureau Central de Statistique du Royaume (Ministere de l'Interieur), Christiana.

Switzerland.—Dr. Louis, Guillaume, Directeur du Bureau Federal de Statistiane (Ministere de l'Interieur), Berne.

Uruguay.—Honore Roustan, Directeur du Bureau de la Statistique General, Montevideo.

Circular to Town Clerks.

The following circular was issued in March, 1901, to the Town Clerks of the smaller cities, towns and villages of the Province. In reply to the 243 circulars sent out 130 answers were received. A record is herewith given of these answers, which includes a list of the new industries established in the various towns, the openings that may exist for other enterprises, and the remarks and suggestions that have been sent to the Bureau for publication regarding industrial development, etc.

DEPARTMENT OF PUBLIC WORKS, ONTARIO.—THE BUREAU OF LABOR.

Toronto, March 11th, 1901.

Dear Sir,—The Bureau of Labor of the Province of Ontario is at present engaged in an investigation of the industries of the Province. In order to make the returns as complete as possible, we seek your co-operation, and respctfully ask you to make as

correct replies as possible to the following questions, and return same to this office in enclosed envelope at your earliest convenience.

Thanking you in advance for this courtesy. Yours respectly,
Secretary, The Labor Bureau, Ontario.

1. What new industries, if any, have started in your town within two years? (Give name of firm or firms) .....
2. Nature of business? .....
3. Nearest postoffice address? .....
4. Has any industry changed hands? .....
5. Do you consider there is any opening in your town for new industries? .....
6. If so, of what character? .....

Remarks from Town Clerks.

Brighton—Almost of any kind of factory, except canning industry, of which there are two here now.

Dunnville—New industries: F. R. Lalor Canning Factory, Dominion Hammock Company, Dunnville Knitting Mill, Dunnville Planing Mill Company, Lalor Vinegar Works. Opening for good iron foundry and machine shop.

Alexandria—Two new industries, Soft Drinks and Export Lumber. Good opening here for grist mill; had a good one here until four years ago, but owing to litigation, re insurance, etc., has not been rebuilt. There is no grist mill nearer than seventeen miles. A site, with good water-power, could be procured reasonably here, and town would give exemption from taxes for ten years; a free site without water-power is also available.

Barrie reports a brewery, and, also, Barrie Waterworks Company, name of firm Anderton & Company. Opening for any industry in the wood working department. The Barrie Tanning Company have erected buildings and plant capable of employing 200 hands, former capacity 25 to 30; a carpet weaving and cleaning company have just engaged premises, and are about to open up business, employing five or six hands to start with. Barrie has good railroad accommodation; lines to Toronto, Hamilton, Meaford, Midland, Penetanguishene, Orillia and North Bay.

Forest—Sutherland, Innes & Company (stave mill); William Pepper & Company (foundry and machine shop). Opening for furniture manufacturing, agricultural implements, pork packing, cold storage, carriage making.

Cornwall—It is hard to specify, but we are willing and anxious to treat with manufacturers of furniture, carriages, boots and shoes; in fact almost anything employing labor and paying good wages, as we possess excellent facilities for shipping, both by rail and water, besides many other advantages.

Aylmer—Laidlaw, Watson Shoe Company; Aylmer Mnfg. Company (turned goods). There are openings for several kinds of industries, except as above.

Dresden—Good opening for canning factory, tobacco factory, flax mill, or other industry not coming too much into competition with the large centres. There is railroad accommodation here, and an unsurpassed farming country around. The municipality is prepared to aid any desirable industry located here.

Bracebridge—John Leishman & Son (lumber, lath and shingles). Opening for spool or furniture factory. There is good water-power here, and after the 15th September the corporation will have electric power to furnish on most favorable terms.

Burk's Falls—A grist mill would do well here; also a woollen mill.

Elora—No new industry here, but J. C. Mundell & Company have enlarged their furniture factory premises considerably, going into the manufacture of chairs very extensively. Opening for almost any industry; foundry, machine shop, boots and shoes, carpets, woollens, etc., etc. There is the water-power (Grand River), and several vacant premises.

Drayton—Good opening for machine shop. There is now a project before the people to aid in establishing an industry for the manufacture of felt and felt shoes.

Alvinston—Good opening for sugar-beet factory; flax mill and vitrified brick. There are two railroads, the Grand Trunk and the Michigan Central, and the village is well supplied with water by the Sydenham River, and is located in one of the best farming districts in western Ontario.

Bayfield—John Whiddon, fruit evaporator. Good opening for flour mill, as there is no flour mill within twelve miles; there is also a good harbor for shipping facilities.

Alliston—Good opening for the manufacture of woollen wares and agricultural implements.

Gananoque—Gananoque Harness Factory. Good opening for comfortable summer hotel, to accommodate 200 or 300 guests at reasonable rates; cabinet factory. We have all the native woods, cheap and abundant, required. A good building, with water-power, is available, and is well adapted for cabinet or carriage factory. A carriage factory, well managed and with sufficient capital, would succeed without doubt. Good facilities for pork-packing factory, as regards supplies, water, yard room and shipping. Sharp business with capital would find this an excellent place to locate.

Bowmanville—Good opening for furniture factory, foundry and machine shop, the latter being badly needed. We are open to encourage the establishment of industries by bonuses and other privileges.

Brockville—Canada Oak Belting Company. Good opening for first-class machine shop and boiler works; pork packing; electric street railway, condensed milk for export to South Africa. We have one of the best central shipping points in Canada, both by rail and water, during open navigation.

Carleton Place—Good opening for carriage works; pulp mills and furniture factory.

Bobcaygeon—Opening for burning lime, tannery, any wood factory, a 300-room summer hotel.

Ailsa Craig—This is not a competing point, and until legislation equalizes rates between long and short haul railway freights the establishment of any important industry here would be unwise.

Belleville—Abbot, Mitchell Iron & Steel Works; R. J. Graham, evaporation of vegetables and cold storage; C. B. Smith, pork-packing; H. M. Forward, cigar factory; King Shirt Company, Limited. Good opening for the manufacture of agricultural implements, also carriages, cotton goods, ship yards, smelting works, being only 25 miles from the Madoc iron deposits.

Collingwood—Collingwood Steel Ship Company; Charlton Brothers, sawmill. Opening for any manufacture of wood or iron.

Colborne—Opening for any kind of industry; old industrial factory shut down owing to the irresistible competition of the large central concerns, or the old appliances being outlawed.

Durham—Durham Furniture Company, Limited. Good opening for Portland Cement Works.

Essex—A chopping mill to chop coarse grains for the farmers for feeding stock and hogs is much needed. There is also a fine opening for a first-class beet-sugar factory, as the soil and climate are both peculiarly adapted to the growth of a high-class sugar beet of great richness; also for a tobacco factory. The soil here is rich and produces heavy crops of first-class tobacco, and it would be grown here extensively if there was a market convenient.

Bridgeburg—Being purely a railroad town, there are no industries here, but there is a good opening for almost any kind good shipping by rail, and also by the Niagara River.

Fort William—Gilbert, Hartley & Company, broom factory; S. Stevens & Company, grist mill and shingle factory; E. Wocker, soda water factory; Gowanlock & Company, brickmakers. There are splendid opportunities for new industries at this point, with a town as fast coming into prominence as we are, and a population growing steadily; natural advantages unsurpassed; good fire protection; municipal ownership of electric light and waterworks; splendid sewerage. Wholesale houses should find this to be a

profitable place to do business, being at the head of lake navigation, and must in time be the distributing point for all Manitoba and the Northwest; mining business, gold, silver and iron in abundance; pulpwood and fishing. We have now under consideration an offer from the American Steel & Wire Company for the erection of ore docks, a smelter, and the head office of their operations in the Dominion of Canada.

Renfrew—Opening for any industry that requires water or electric power, as we have good supply.

Tweed—Pratt, Patching & Company, electric light; Walker & Lockwood, hub factory. Good opening for woollen and canning factories.

Uxbridge—Opening for any good manufacturing concern; a good creamery would be a good thing here. We have good water-power and could supply woollen factory.

Trenton—The Gilmour Company, Limited, box manufacturers, lumber, etc. Opening for any industry in the manufacture of wood, or for anything in the manufacturing line requiring water-power. Trenton would be an ideal location for iron and steel works. It has splendid shipping facilities by rail and water, is in a limestone district, and is the gateway for the mines of North Hastings and the Central Ontario Railway.

Waterloo—Opening for any kind of factory, especially boot and shoe.

Tottenham—F. Strangway, piggery; M. & G. Hamilton, piggery. Good opening for furniture factory.

Stouffville—James Packenham, pork packing; Forsyth Acetylene Generator Company. Good opening for boot and shoe factory, creamery and beet-sugar factory.

Cannington—Cannington Creamery Company, Knitting Factory, Victoria Piano Factory. Good opening for canning factory, boot and shoe factory, furniture factory; also for companies to enlarge carriage factory, tannery and woollen mills, which are at present not working to their full capacity for want of capital.

Beaverton—Alex. Dobson, mnfr., peat. Good opening for cement works; some of the best clay in Ontario is found in large quantities in this locality, suitable for bricks, tiles, pottery and cement.

Bradford—Good opening for pork-packing, manufacture of mattresses, and peat. Any industry employing labor would find this town a good location.

Seaforth—Robert Bell, jun., foundry and machine shop. There is a woollen mill closed down here for want of capital, and a flax mill has been idle for some time owing to the dull market for flax.

Woodbridge—Good openings for foundry and woollen mill, buildings all complete, with good water-power or steam. These buildings, which were formerly used for the manufacture of agricultural implements, could be rented for a mere trifle.

Ayr—W. J. Reid, sawmill. There is a prospect of an electric plant being started here, with the promise of the distribution of power, in which case white goods could be manufactured. There are vacant buildings which could be utilized for this purpose.

Oakville—Opening for manufacturing industry of any description.

Vankleek Hill—Opening for canning and other industries where a running stream of water is required. Vankleek Hill is surrounded by an excellent agricultural country.

Smith's Falls—The Perrin Plow Company, manufacturers of a newly-invented riding plow. Openings for industries of any kind, principally woollen or cotton manufactures. There is water-power and a good stand vacant.

Clinton—Andrews Brothers, cement works; J. E. Crealy, Dairy Company. Good opening for furniture factory or pork-packing etsablishment.

Hespeler—Opening for any new indutsry that will employ males.

Port Perry—Robert Lucas & Company, Saddlery; Canning Factory. Good opening for a beet-sugar factory.

Picton—Opening for apple barrel factory, roller grist mill, beet sugar industry, another canning factory, grand opening for pork-packing establishment. "Capital and enterprise is what we are deficient in."

Lancaster—R. J. McDougall & Son, grinding grain for feed. Not very much opening here for new industries.

Thorold—The Rehder Manufacturing Company, the Imperial Art Wood Company, There is also a company building a pulp mill to have in operation in the spring. Good opening for manufacturing industry requiring water-power.

Lindsay—Rider & Kitchener, Veneer Factory; R. M. Beal, tannery; the Kennedy Downs Milling Company, barrel factory; Squire & Sons, seed pea industry. Opening for furniture factory, carriage factory, piano factory, and any factory for the manufacture of wood, or in fact any kind of industry.

Stratford—The Whyte Pork Packing Company; Rustin Brothers, furniture manufacturers. Opening for all kinds of industries.

Perth—The Perth Woollen Mills Company, Dettrick Bolt Factory. Good opening for new industries; a rubber factory was talked of, and would doubtless prove a profitable investment.

Paris—Opening for agriculture and machine works, waggon works, machine shops, meat curing and packing, and almost any industry.

Elmira—The Elmira Felt Company, Limited. Good opening for the manufacture of furniture and shoes.

Morrisburg—Opening for almost any industry. We expect to have an electric power plant in operation this summer (1901), and will likely have some power to be utilized.

Perscott—Imperial Starch Company, starch and glucose mnfrs. Opening for factory of any kind; splendid shipping facilities, being connected with both Grand Trunk and C. P. R., and also St. Lawrence River.

Strathroy—Cameron, Dunn Mnfg. Copmany. Opening for new industries, character not specified.

Goderich—Opening for any manufacturing industry.

Niagara Falls—Ontarlo Silver Company. Hinds' Box Factory. Opening for any kind of industry.

Madoc—Sandford & Brooks, carriage mnfrs.

Welland—George Robertson, fruit evaporator. Any kind of industry would be well situated in this town, for the reason that the facilities for transportation are not excelled by any town in Ontario, as there are five different lines of railway and the Welland Canal (the last named running through the centre of the town), all convenient for the transportation of manufactures or material.

Port Colborne—K. & C. B. Shickluna Bicycle Works. Good opening here for blast furnace and steel works, or dry dock; would he glad to correspond with any person re above.

Port Dalhousie—The Maple Leaf Rubber Company, mnfrs., rubber shoes. There is every facility here for new industries, good shipping by either rail or water, besides electric power for rental on easy terms.

Whitby—Clothing Mnfg. Company. A splendid opening here for almost any industry. The town is situated on a good harbor, with railway communication east, west and north. Land is cheap and rents are very low, which should make this town a favorable location for industries seeking a site.

Walkerville—Gardner Brothers, handle factory; Seagrave Ladder Company, Match Factory, Fly Paper Factory, Canadian Bridge Company, Limited, Ideal Manufacturing Company. Good opening here for a beet-sugar industry. "We have twenty-one industries in our little town, and one helps another; we have every facility for new industries."

Huntsville—William Craddock, broomhandle mnfr. Good opening for the manufacture of woodenware of various descriptions and spool factory; also for charcoal; there is lots of hardwood in the vicinity, birch, maple and beech.

Ridgetown—Good opening for canning factory and pork-packing factory.

Waterford—Good opening for foundry and repair shop; a good section of country for beet-sugar industry.

Newburgh—Drury Brothers' flour mill rebuilt. There is good water-power here undeveloped; would be good site for wheel factory or woollen factory. We have a splendid foundry and machine shop here, well equipped with new machinery, for manufacturing agricultural implements, but the owner lacks capital, but would otherwise do a big business.

Simcoe—Lea & Company, pickle factory; Charles Severeen, mattress factory; Frank Pierce, job printing.

Leamington—Canadian Ladder Company, the Consumers' Tobacco Company, Epiral Tobacco Manufacturing Company, The Whiffle Tree Company, whiffle tree mnfrs. Good Opening for pork-packing establishment and for canning factory.

Oshawa—Smith & Company, canning factory. There is an ideal factory vacant here, which was used last as a furniture factory. Good opening for the manufacture of boots and shoes, clothing and iron industries, pork packing, agricultural implements.

Kingsville—The Ontario Glass Company, Limited; The Erie Tobacco Company, Limited; The Imperial Canning Company; Ernest Bailey, tobacco sorting and curing; C. Johnson, box factory. Good opening for any industry for which cheap fuel is important; opening for sash and door factory. We have natural gas for fuel, an important incentive to industrial enterprise, if it is preserved to us and not squandered for the benefit of Americans by unlimited exportation.

Millbrook—George Locks, waggon shop. We have no industries here, but any kind would be welcome, as there is no work for men in winter.

Meaford—Cleland Brothers & Company, mnfrs of wheelbarrows, etc.; Meaford Elevator Company, handling of grains, etc. Good opening for industries here. Efforts are being made to get a blast furnace similar to the one at Midland. There are good lake shipping facilities here, as well as connection by railroad; water-power is also available, and there is plenty of timber in the neighborhood. We have good opening for sawmills, canning factories, cheese factories, barrel factories and the manufacture of stoves.

Markham—Underhill & Sissman, boot and shoe mnfrs. Ferrol Medicine Company, Tonicine Pill Company. Good opening for tannery and creamery; good district for sugar beets.

Sarnia—Edmund Hall, sawmill and lumber; E. M. Marshall, mnfr. of display tables; Henderson & Morgan, "Eureka" Engine and Machine Shop; Cleveland Sawmill & Lumber Company. Opening here for sawmills, grain elevators, transportation companies, and any kind of manufacturing industry, particularly where a market is sought in the northwest.

Port Stanley—Good opening for canning factory, hand factory, smelting works, in fact, industries of any character; good water privileges and other inducements.

Merritton—Andrew Clark, Merritton Brass Foundry. Good opening for any industry requiring water power. There is a large vacant factory here with the best water-power on the Welland Canal.

Paisley—Paisley Pork Packing Company. Good opening for furniture factory.

Hanover—Plenty of water-power here and the taxes are light.

North Bay—Good opening for the manufacture of all kinds of lumber.

Preston—Mineral Springs Furniture Company, Limited; Preston Furniture Company, Limited. Plenty of openings for new industries, especially for the manufacture of furniture and boots and shoes. Taxation free, except school tax; loan likely would depend on Council.

Listowel—Samuel Forbes Chair Factory; Listowel Furniture Company, Limited; Ness Brothers Bent Chair Factory, Limited. Good opening for new industries here.

Port Dover—Morgan & Liddy, fruit evaporator. Shipping facilities first-class by rail and water for manufacturing industries.

Norwood—J. L. Squire & Son, pork packing and cold storage. Good opening for chair factory, foundry, smelting works, carriage and waggon factory, tannery.

Shelbourne—Good opening here for any industry using hardwood, and any system of making bricks or tile clay. There are also undeveloped quarries of excellent build-

ing stone. Good section of farm lands adjacent to this town. These lands are improving fast in value, and any industry dealing directly with farmers should find this location good. The great drawback is the want of railway competition. The C. P. R. has a monopoly of transportation and rates are high.

Glencoe—Davis & Company, creamery. Openings here for apple evaporator, flax mill, canning factory. We are surrounded by an excellent farming country.

Kincardine—H. Coleman, pork factory. Openings here for factories of any kind sawmills, etc.

Delhi—Excellent opening for the manufacture of farm implements particularly.

Tilbury—Adam H. Roszel, furniture factory. First-class opening for a number of industries including planing mill, sash and door factory, canning factory, pork packing factory, etc.

Almonte—Everett & Doyle, butter factory to be operated during part of the winter. "This is a manufacturing town, the principal industries being in woollens, cloth and knit goods. The cotton industry should find a good location here. In fact there are some good water-powers with buildings on them at present vacant, which might be utilized for almost any industry. These powers can be bought very reasonably.

Walkerton—The Walkerton Binder Twine Company, Sieling Furniture Company. Good opening for foundry and oatmeal mill. Good water-power can be obtained from the Saugeen River. A biscuit factory could be easily promoted here. The town will give a loan and exemption from taxes for a period of years.

Port Elgin—Miller Brothers, sash and door factory; Bowman & Zinkan, tannery. Good opening for evaporating factory, canning factory, barrel making, pork packing.

Palmerston—Palmerston Pork Packing Company. This is a splendid railway centre, with good openings for the manufacture of furniture, stoves, binder twine.

Sault Ste. Marie—Canadian Electro Chemical Works; Sulphide Pulp Mill, Nickel Reduction Works. Good opening for furniture factory and flour mill.

Chesley—Chesley Rake & Novelty Factory. Opening for tannery and knitting factory.

Grimsby—John Grout & Company, basket factory; J. W. Van Dyke, evaporated apples; S. Balfour, canned fruit and vegetables; James A. Hewitt, planing mill. Good opening for basket factory and canned goods. Lack of water supply has prevented the development of several lines of business.

Orangeville—McDonald, Ceasar & Company, caskets and coffins. Good openings here, and the town is willing to offer Liberal terms to industries to locate here, and is now in correspondence with reference to the establishment of a biscuit factory, pork-packing company, Portland cement works, etc.

Merrickville—National Wire Fence Company; Mills & Brimstin, sash and door factory. There are good buildings and water-power not in use here, suitable for manufacturing.

Streetsville—"We have splendid water-power, capable of giving 200 horse-power per day. The village is willing to assist any manufacturing industry by way of bonuses."

Lanark—Good opening for wood working manufactures, but there is no railroad nearer than 11 miles.

Port Arthur—Reports no new industries, but good openings for pulp mills.

Wingham—Iron and Brass Foundry. Good opening for stove foundry, shoe factory, biscuit factory. Good shipping facilities by Grand Trunk and C. P. R.

Hagersville—Good opening for canning factory.

Hastings—Reports good opening for cotton or woollen mills, and also paper mills.

Wiarton—H. C. Withrow & Company, lumber mnfrs; Canadian Spool & Bobbin Company; Simon Brothers & Hill, mnfrs. of tables and mattresses; Dominion Portland Cement Company; Wiarton Oil & Gas Company, Limited. Good opening for any industry developing the natural resources of the Province. The facilities for shipping by water are first class, and there is also the Grand Trunk Railway.

Kemptville—There is no better district for any agricultural industry.

Pembroke—Pembroke Development Company, mnfrs. of scales and Webster grinders. Openings for sawmill, pork-packing factory, pulp mill, any industry manufacturing woodenware. Good facilities for export, being on the main line of the C. P. R., and a branch connecting with the C. A. Railway.

Windsor—Turning Goods Company, Limited; Paper Box Factory; Gas Meter Manufacturing Company, Limited; Two small cigar factories. Good opening for pork-packing establishment. Corn is the staple crop with the farmers of this county, the bulk of which is used in fattening hogs, which are killed and shpiped east, instead of being converted into bacon, etc., here, where three trunk lines of railway and ample water transportation afford unequalled facilities for reaching desirable markets.

Bolton—John S. Proctor, mnfr. acetylene gas.

Bothwell—Reports good opening for canning factory, or almost any industry, as land is cheap and the people are in need of employment.

Stirling—Good opening for fruit canning factory.

Lakefield—Lakefield Portland Cement Works. Opening for furniture and woollen mills.

Fergus—Reports good opening for any manufacturing industry; good shipping facilites and healthy situation. The Municipal Council will grant no money bonus, but may exempt from taxation.

New Hamburg—Opening for the manufacture of any kind of small and light wares. Paper boxes could be made to engage younger folks, and supply felt factory, etc.

Stayner—"This is a good fruit locality and an evaporator ought to do well."

Owen Sound—Imperial Cement Company, The National Table Company, The Parkhill Basket Company; W. Kennedy & Sons, founders, have enlarged their business and premises by adding thereto a plant for the manufacture of steel. Good opening for industries of every character. The town is connected with both Grand Trunk and C. P. R., and has unlimited harbor accommodation. No town in Ontario offers better shipping facilities than Owen Sound.

Blyth—Drummond Brothers, flax mill Good opening for any industry that would employ help.

Aurora—Boot and Shoe Factory. Opening for all kinds of industries.

Sturgeon Falls—Edward Lloyd Company, Limited, pulp mufrs. Good opening for flour mill, foundry, sash and door factory. We have first-class wheat producing country in four surrounding townships, and a flour mill is greatly needed.

Point Edward—Good openings here for new industries, but the Grand Trunk Railway owns all the property and the terms are not satisfactory. Good opening for sawmill or smelting works, or in fact any industry requiring easy transportation by rail or water. In boring for oil two years ago we struck gas, and it has burned ever since from each well lighted. We also pumped thirty pounds of oil, but the Grand Trunk would only grant property right from year to year, and our little testing company gave up.

Brussels—Good locality for beet-root sugar. The land is good and on limestone sub-soil, and there is plenty of limestone for factory purposes.

Maxville—Two sawmills and a general store have been started here within the last two years. There is also a good opening for a newspaper and a bank.

Circular to Central Labor Organizations.

The appended letter was sent to:—

The Trades and Labor Councils of Ontario.
Trades and Labor Congress of Canada.
Federated Council of Building Trades, Toronto.
Allied Printing Trades Council, Toronto.
District Assembly, No. 180, Knights of Labor, Toronto.
Amalgamated Wood-Workers' Council, Toronto.
Federated Council of Metal Trades, Toronto.

DEPARTMENT OF PUBLIC WORKS, ONTARIO—THE BUREAU OF LABOR.

Dear Sirs,—For the information of the membership of labor organizations particularly, the Ontario Labor Bureau purposes publishing in its next report as complete as possible a directory of labor organizations, local and central. With this object in view, I would respectfully request that you furnish answers to the following questions:—

1. Name of organization? .....
2. Location? .....
3. Date organized? .....
4. Number of organizations represented? .....
5. Name of President for current term? .....
6. Address? .....
7. Name of Corresponding Secretary for current term? .....
8. Address? .....
9. Nights of meeting? .....
10. Do the above named officers object to the publication of their names and addresses in the Bureau report? .....

In addition to the above information, the Bureau would be pleased to have for publication any remarks or suggestions of a general or specific character, which, in the opinion of your body, may seem wise and proper, bearing upon the industrial question, or looking to such legislation or otherwise, as will, in its judgment, be of permanent benefit to the people. Yours respectfully,

Secretary, The Labor Bureau, Ontario.

CIRCULAR TO LABOR ORGANIZATIONS.

The following circular and accompanying schedule were forwarded to the labor organizations in the Province of Ontario :—

DEPARTMENT OF PUBLIC WORKS, ONTARIO—THE BUREAU OF LABOR.

Dear Sir,—The Bureau of Labor of the Province of Ontario is now engaged in its second year's work, in collecting such data as will give intelligent knowledge of the conditions of wage-workers, as to wages, hours of labor, and such other information as the Bureau may be able to gather, which will be of special interest to the people of our Province. The response of labor organizations last year to our inquiries for information was not as complete as we would wish, due, doubtless, to some misapprehension as to the purposes of the Labor Bureau, and due, also, perhaps, to some suspicion as to the uses that would be made of the information so furnished. We trust, however, that the report published by the Bureau will remove much of such misapprehension or suspicion. Copies of the report have been forwarded to the secretaries of each labor organization whose address could be procured. Should your organization have been missed, and you will kindly drop me a line so informing me, I will be pleased to have a copy forwarded at once.

The Bureau requests that you bring this matter before your body at its first meeting after receipt of this, with a view to their authorizing the filling in of the questions in accompanying schedule.

The Bureau begs to give the assurance that the strictest confidence will be at all times observed between it and its informants. The information and data collected for the investigations of the Bureau will be so classified and grouped as to preclude recognition of individuality, and no names will be published without permission. Should blank spaces not admit of full answers, kindly use additional blank paper.

The Bureau invites, and will cordially receive ,any remarks of a general character.

Trusting your organization will be pleased to give the Labor Bureau its co-operation, by authorizing the information sought for in the schedule being given, and

returned to this office in enclosed envelope, and thus aid in obtaining the ends sought for in the establishment of the Bureau, viz., assisting the workers to a proper understanding of their conditions within the Province. I am, respectfully yours,

R. GLOCKLING,
Secretary the Labor Bureau, Ontario.

If you are not now secretary of your organization, will you kindly hand this to your successor as soon as convenient.

The Bureau respectfully asks that the name and address of the corresponding secretary of your organization be forwarded, whenever a change of officers takes place.

LABOR ORGANIZATIONS' SCHEDULE.

DEPARTMENT OF PUBLIC WORKS, ONTARIO.—THE BUREAU OF LABOR.

The following questions refer to the year ending December 31st, 1900 :—

1. Location? .....
2. Trade or calling? .....
3. Title of organization? .....
4. Date organized? .....
5. Total membership, Male..... Female.....
6. Average earnings per week, Male..... Female.....
7. No. of working hours first five days? .....
8. No. of working hours Saturday? .....
9. Average number of days idle, per member, during year? .....
10. General cause of idleness? .....
11. Total number employed at your business in your locality, Male..... Female .....
12. What difference in wages or hours of labor (if any) of those engaged at your business in your locality, between members and non-members of your organization, Male..... Female.....
13. What cash benefits, if any, are paid in case of (a) lack of employment .....(b) sickness..... (c) death ..... (d) superannuation.....
14. Do you carry on any special work for members, such as reading-room, evening classes, etc? .....
15. Name of President for current term .....
Address .....
16. Name of corresponding secretary for current term .....
..... Address .....
17. Nights of meeting? .....
18. Do the above named officers object to the publication of their names and addresses in the Bureau report? .....

REMARKS.

Any remarks or suggestions bearing on the subjects under investigation, or anything that in your opinion will improve the condition of your craft, or any other suggestions that in the opinion of your organizatin may seem wise and proper, locking to such legislation, or otherwise, as will, in its judgment, be of permanent benefit, are cordially invited, and will be most cheerfully received, and made the best use of by the Bureau.

In response to the 438 schedules sent out to the labor organizations of the Province but 216 replies were received; the number and location of the various organizations reporting are as follows :—

Allandale	1	North Bay	4
Belleville	2	Ottawa	20
Berlin	13	Owen Sound	1
Brantford	8	Palmerston	1
Brockville	3	Peterboro'	2
Chapleau	1	Preston	2
Collingwood	2	St. Catharines	9
Dundas	2	St. David's	2
Fort William	2	St. Thomas	7
Galt	1	Sarnia	3
Guelph	11	Schreiber	3
Hamilton	30	Stratford	6
Kingston	15	Smith's Falls	3
Lindsay	2	Toronto	47
London	9	Windsor	4
Midland	1	Woodstock	1

The nature of the organizations reporting is as follows :—

Trades Unions	199
Trades and Labor Councils	9
Local Assemblies—	
Knights of Labor	2
Federations of Trades	6

By Trades and Callings the labor organizations, which have made returns, are as follows :—

Allied Metal Mechanics	1
Architectural and Structural Iron Workers	1
Iron Workers	1
Brass Workers	1
Bakers and Confectioners	3
Blacksmiths	1
Bricklayers and Masons	13
Bread Salesmen	1
Bookbinders	2
Builders' Laborers	1
Builders' Laborers (A. F. of L.)	2
Boot and Shoe Workers	3
Boiler Makers & Iron Ship Builders	1
Broommakers	4
Bartenders	2
Barbers	4
Brotherhood of Locomotive Engineers	9
Brotherhood of Locomotive Firemen	9
Brotherhood of Railroad Trainmen	8
Carpenters and Joiners (Amalgamated Society)	2
Carpenters & Joiners (United Brotherhood of)	6
Cigar Makers	6
Carriage and Waggon Makers	1
Carpet Weavers	1
Electrical Workers	1
Engineers (Amalgamated Society of)	3
Fire Dept (Federal Union Trades & Labor Congress of Canada)	1
Federal Labor Unions (A. F. of L.)	5

Garment Workers	1
Horseshoers	1
Hardwood Finishers	1
Iron Molders	8
Iron Workers' Helpers (A. F. of L.)	1
Longshoremen (International)	1
Leather Workers on Horse Goods	1
Letter Carriers (K. of L.)	1
Machinists	9
Metal Polishers, etc	3
Mailers	1
Order of Railway Conductors	7
Plasterers	2
Plasterers' Laborers	1
Printing Pressmen	2
Pattern Makers	2
Piano Workers	1
Painters and Decorators	6
Plumbers, Steam and Gas Fitters	5
Quarrymen (A. F. of L.)	1
Retail Clerks	2
Sheet Metal Workers	6
Street Railway Employees	2
Stone Cutters	2
Stone Masons	1
Typographical	8
Tailors	5
Tobacco Workers	1
Teamsters	2
Theatrical Stage Employees	1
Tanners and Curriers	1
Upholsterers	1
Varnishers and Polishers	1
Wood-workers	10
Wood-carvers	1
Trades and Labor Councils	9
Federation of Trades	6
Knights of Labor (Local Assemblies)	2

RETURNS OF ORGANIZATIONS IN DETAIL.

Central Organizations.

Berlin.

Name of Organization.—Twin City Trades and Labor Council (Berlin); date organized, March, 1901; number of organizations represented, 19; President, Alex. A. Rose, Berlin; Corresponding Secretary, J. H. Kressler, Box 224, Berlin; nights of meeting, first and third Mondays of every month.

Brantford.

Name of Organization.—Brantford Trades and Labor Council; date organized, February 9th, 1897; number of roganizations represented, 18; President, Thomas Bremner, West Mill street; Corresponding Secretary, Frank Mather, 75 Greenwich street; nights of meeting, first and third Wednesdays.

GUELPH.

Name of Organization.—Guelph Trades and Labor Council; date organized, March 1898; number of organizations represented, 8; President, Joseph Dandeno, Guelph; Corresponding Secretary, William Drever, Guelph; nights of meeting, second and fourth Fridays of every month.

HAMILTON.

Name of Organization.—Hamilton Trades and Labor Council; date organized, December 3rd, 1888; number of organizations represented, 30; President, Samuel Landers, Grant avenue, Hamilton; Corresponding Secretary, Henry Obermeyer, 96 Catherine street south, Hamilton; nights of meeting, first and third Fridays.

KINGSTON.

Name of Organization.—Kingston Trades and Labor Council; date organized, December 2nd, 1899; number of organizations represented, 22; President, W. A. Tweed, 79 Arch street, Kingston; Corresponding Secretary, James O'Reilly, William street, Kingston; nights of meeting, first and third Thursdays.

ST. CATHARINES.

Name of Organization.—St. Catharines Trades and Labor Council; date organized January 25th, 1897; number of organizations represented, 10; President, George F. Nicholson, Box 714, St. Catharines; Corresponding Secretary, James Carty, Box 193, St. Catharines; nights of meeting ,first and third Wednesday in each month.

OTTAWA.

Name of Organization.—Allied Trades and Labor Association; date organized, 1898; number of organizations represented, 20; President, V. H. Annable, 374 Gloucester street, Ottawa; Corresponding Secretary, P. M. Draper, 93 Slater street, Ottawa; nights of meeting, second and fourth Friday of every month.

STRATFORD.

Name of Organization.—Stratford Trades and Labor Council; date of organization, July 21st, 1900; number of organizations represented, 9; President, William Stovel, Stratford, Ont.; Corresponding Secretary, Walter Crossland, Box 5, Stratford, Ont; nights of meeting, second and fourth Friday of each month.

TORONTO.

Name of Organization.—Toronto Trades and Labor Council; date organized, 1881, number of organizations represented, 47; President, Samuel Moore, 52 Teraulay street, Toronto; Corresponding Secretary, D. W. Kennedy, 59 Edward street, Toronto; nights of meeting, second and fourth Thursdays of every month.

Name of Organization.—Amalgamated Wood Workers' Council; date organized, December, 1900; number of organizations represented, 5; President, S. Moore, 52 Teraulay street, Toronto; Corresponding Secretary, A. J. Bateman, 138 Lisgar street, Toronto; nights of meeting, second and fourth Monday of each month.

Name of Organization.—Federated Council of Building Trades; date organized, 1886; number of organizations represented, 10; President, F. J. Wilson, 91 Palmerston avenue, Toronto; Corresponding Secretary, Patrick Cox, 52 Regent street, Toronto; nights of meeting, second and fourth Monday of every month.

Name of Organization.—Allied Printing Trades Council; date organized, June 1895; number of organizations represented, 8; President, M. J. Carmody, 198 Baldwin

street, Toronto; Corresponding Secretary, William Irwin, 38 Niagara street, Toronto; nights of meeting, first and third Tuesday of every month.

Name of Organization.—Federated Council of Metal Trades; date organized, February 11th, 1901; number of organizations represented. 10; President, John Francis, 19 Caer Howell street, Toronto; Corresponding Secretary, Horace J. Maughan, 284 Euclid avenue, Toronto; nights of meeting, second and fourth Monday of every month.

LOCAL UNIONS.

Allandale.

Name of Union.—Div. No. 486, Brotherhood of Locomotive Engineers; date organized, February, 1892; total membership, 30; number employed at this calling in this locality, 64; death benefits, $750, $1,500, $3,000, $4,500, according to premium; President, Daniel Cameron, Allandale, Ont.; Secretary, George S. Lawrence, Box 24, Allandale, Ont.; nights of meeting, first Sunday and third Tuesday.

Belleville.

Name of Union.—Amalgamated Sheet Metal Workers' Union; date organized, February. 1901; total membership, male, 19; average earnings per week, $7.50; number of working hours first five days, 10; number of working hours Saturday, 2; total number employed at this calling in this locality, 25 journeymen There is no difference here between union and non-union workers as regards wages; we have not yet made a demand for higher wages as a union. No special work is carried on for members, although our constitution provides for classes of instruction in each union, but we have not started that yet. President, Moses Doyle, Grove street, Belleville; Corresponding Secretary, John McCarthy, Murney street, Belleville; nights of meeting, first and third Friday of each month.

Name of Union.—Lodge No. 66, Brotherhood of Locomotive Firemen; date organized, 1884; total membership, 67; total number employed at this calling in this locality, 80; there is no difference here between union and non-union men as regards wages; benefits, sickness $3.00 per week, death according to amount of premium; President Charles Orrill, Station P. O., Belleville; nights of meeting, second and fourth Tuesdays in each month.

Berlin.

Name of Union.—Bricklayers', Masons & Plasterers' Union, No. 12, Ontario; date organized, March, 1900; total membership, 46; average earnings per week, $13.50; number of working hours, first five days nine, Saturday nine; total number employed at this calling in this locality, 46; President, August May, Berlin P. O.; Secretary, Jacob E. Cook, 11 Church street, Berlin, Ont.; nights of meeting, every Thursday.

Name of Union.—Amalgamated Woodworkers' International Union, No. 129 (Hardwood Finishers); date organized, March 8th, 1900; total membership, male, 72; average earnings per week, $8; number of working hours first five days, 10; number of working hours Saturday, 9; average number of days idle per member during year, 30; general cause of idleness, slackness of work; total number employed at hard wood finishing in this locality, 120; there is no difference in the wages or hours of labor between union and non-union men; dues are paid in case of lack of employment, and $75 in case of death. President, George Fehrenbach, Berlin; Corresponding Secretary, Michael Kahle, Berlin; nights of meeting, second and fourth Wednesdays of every month.

Name of Union.—Brotherhood of Painters, Decorators and Paperhangers; date organized, April 16th, 1901; total membership, 14; average earnings per week, $9.00; number of working hours first five days, 10; number of working hours Saturday, 9; cash

benefits in case of death, $100 after one year's membership, $150 for two years' membership; President, Julius Rietz, Cameron street, Berlin; Corresponding Secretary, Geo. H. Stahle, Berlin, Box 392; nights of meeting, second and fourth Tuesday of every month.

Name of Union.—Broommakers' Local Union, No. 7 (Berlin and Waterloo); date organized, April 2nd, 1900; total membership, 9; average earnings per week, $8.50; number of working hours first five days, 10; number of working hours Saturday, 8, except June, July and August, when the number of working hours is 5; general cause of idleness, the crop of broom corn is sometimes a failure, and this makes the price very high; total number employed, 10. Since organization two advances in wages have been received, in all about 25 per cent., and the hours of labor have also been shortened to some extent; President, E. Kuhn, Berlin, Ont.; Corresponding Secretary, A. J. Volge, Box 507, Berlin, Ont.; nights of meeting, second and fourth Monday.

Name of Organization.—Amalgamated Woodworkers' International Union No. 112 of America; date organized, March 14th, 1900; total membership, 220; average earnings per week, $7.50; number of working hours first five days, 10; number of working hours Saturday, 9; number employed at woodworking in this locality, 220; benefits, dues are paid in case of lack of employment and sickness; President, Franklin Schatz, Berlin; Corresponding Secretary, C. Kuehner, Berlin; nights of meeting, second and fourth Wednesday in the month.

Name of Organization.—Berlin Wood Carvers' International Association of North America; date organized, October 24th, 1899; total membership, 42; average earnings per week, $10; number of working hours first five days, 10; number of working hours Saturday, 5; benefits, $50 in case of death is the only benefit paid; President, David Heit, Berlin, Ont.; Corresponding Secretary, Edward J. O'Brien, Berlin, Ont.; nights of meeting, first and third Tuesdays.

Name of Organization.—Tanners' and Curriers' Union, No. 8,231, A. F. of L.; date organized, March 23rd, 1900; membership, 60; average earnings per week, $7.50; number of working hours first five days, 10; number of working hours Saturday, 10; total number employed at this calling in this locality, 210; President Frank Ackernecht; Corresponding Secretary, Herman Shallhorn, Berlin; nights of meeting, second and fourth Wednesday of each month.

Name of Organization.—Retail Clerks' International Union, No. 28; date organized, May 5th, 1901; membership, 46; average earnings per week, $8; number of working hours first five days, 10; number of working hours Saturday, 15; total number of retail clerks in locality, male, 75; female, 25; cash benefits, death, $50.00; do you carry on any special work for members, such as evening classes, etc.? We have not as yet started, but will in a few months; President, Adam Sippel, care A. Weseloh & Company, Berlin; Corresponding Secretary, Albert K. Levan, 34 Queen street, south, Berlin; nights of meeting, first and last Friday in every month.

Name of Organization.—General Teamsters' International Union, No. 194; date organized, April 16th, 1901; membership, 22; average earnings per week, $21.00; number of working hours first five days, 10; number of working hours Saturday, 10; average number of days idle per member during year, four months; general cause of idleness, winter weather; total number of teamsters in locality, 34; difference in wages between union and non-union members, 50c per day; President, Julius Luft, Berlin; Corresponding Secretary, P. K. Weber, Berlin; nights of meeting, second Thursday of every month.

Name of Organization.—Cigar Makers' International Union, No. 422; date organized, July 8, 1899; membership, 51; average earnings per week, $9.00; number of work-

ing hours first five days, 8; number of working hours Saturday, 7; average number of days idle per member during year, 25; general cause of idleness, damp weather; total number of cigar makers in locality, male, 50; female, 5; difference in wages and hours of labor between union and non-union members, $9.00 per week; non-union, $7.00 per week; union men work 8 hours per day, non-union, 10; cash benefits, lack of employment, $3.00 per week; sickness, $5.00 per week; death, from $50 to $550; President, F. G. Carroll, Berlin, Ont.; Corresponding Secretary, Henry Englert, Box 224, Berlin, nights of meeting, Executive Board, every Monday evening; regular meeting, second Tuesday of every month.

Name of Organization.—International Typographical Union, No. 336; date organized, April 2nd, 1900; membership, 16; female, 1; average earings per week, male, $7.50; female, $7.00; number of working hours first five days, 9; number of working hours Saturday, 6 1-2; total number employed in this calling in locality, male, 25; female, 5; difference in wages between union and non-union members, male, $2.00 per week; female, $3.00 per week; President, Charles Delion, Berlin; Corresponding Secretary, Anthony Beith, Box 70, Berlin; nights of meeting, first and last Friday of every month.

BRANTFORD.

Name of Organization.—Cigar makers' International Union, No. 59; date organized, March 15th, 1886; membership, 21; average earnings per week, $8.00; number of working hours first five days, 8; number of working hours Saturday, 5; average number of days idle per member during year, 68; general cause of idleness, dullness in trade, material affected by weather or lack of help to prepare material; total number employed in this business in this locality, 35, as follows, male, union, 21; non-union, 6; female, non-union, 8; there is a difference in wages between union and non-union workers of from $2.00 to $4.00 per week, and the non-union workers are employed for 12 hours per day; cash benefits, lack of employment, $3.00 per week; sickness, $5.00 per week for 13 weeks; death, $500 to $550, also a loaning system to the amount of $20; President, A. Crandass, Mohawk street, Brantford, Ont.; Corresponding Secretary, Frank Mather, 75 Greenwich street, Brantford, Ont.; nights of meeting, third Tuesday in every month.

Name of Organization.—Sheet Metal Workers' International Association, Local Union, No. 98; date organized, April 3rd, 1900; membership, 15; average earnings per week, $10.50; number of working hours first five days, 10; number of working hours Saturday, 9; average number of days idle per member during year, 54; cause of idleness, lack of work in the winter; there is no difference here in the wages or hours of labor, as all the sheet metal workers belong to the union; President, P. A. Cheevers, 25 Gilkinson street, Brantford; Corresponding Secretary (pro tem.), P. A. Cheevers, 25 Gilkinson street, Brantford; nights of meeting, fourth Tuesday of every month.

Name of Organization.—Operative Plasterers' International Union; date organized, April 9th, 1900; membership, 9; average earings per week, $10.00; number of working hours first five days, 9; number of working hours Saturday, 9; average number of days idle, the winter months, on account of the cold weather, and this is the slack time in building trades. The difference between union and non-union men as regards wages and hours of labor is that non-union men work 10 hours per day, and for 5 per cent. less wages; President, Joseph Wood, Eagle Place, Brantford, Ont.; Corresponding Secretary, John A. Whelan, 151 Rawdon street, Brantford; nights of meeting, second Tuesday in every month.

Name of Organization.—United Association of Journeymen Plumbers, Steam and Gas Fitters, etc.; date organized, October 28th, 1899; membership, 10; average earnings per week, $13.75; number of working hours first five days, 10; number of working hours Saturday, 5; average number of days idle per member during year, 72; general cause of idleness, the winter season and depression in the building trades; President, J. Anguish, 30 North Bruce street, Brantford; Corresponding Secretary, F. Helm, 186 Sheridan street, Brantford, Ont.; nights of meeting, second and fourth Wednesday in every month.

Name of Organization.—Lodge No. 382, International Association of Machinists; total membership, 45; number of working hours first five days, 10; number of working hours Saturday, 9 in winter, 5 in summer; total number of machinists and helpers in this locality, 740; difference in wages between union and non-union men about $1.50 per week, hours are the same; benefits, death, $50; President, William Dickson, 40 King street, Brantford; Corresponding Secretary, G. F. Towers, 221 Darling street, Brantford; nights of meeting, second and fourth Wednesday of every month.

Name of Organization.—Bricklayers' and Masons' International Union; date organized, March 10, 1898; membership, 46; average earnings per week, $9.00; number of working hours first five days, 9; Saturday, 5; average number of days idle per member, 110, as there is no work in cold weather; non-union bricklayers work 10 hours per day, wages not known; President, W. J. Kerr, 97 Wellington street, Brantford; Corresponding Secretary, Edward Fisher, 83 Victoria street, Brantford; nights of meeting, every Thursday.

Name of Organization.—Federal Labor Union, No. 7,370, A. F. of L.; date organized, 1898; membership, 75; average earnings per week, $8.50; number of working hours first five days, 9; number of working hours Saturday, 5; average number of days idle per member during year, 4 weeks; general cause of idleness, bad weather; total number of laborers in locality, 100; cash benefits, sickness, $4.00 per week; the union maintains a reading room for the benefit of members; President, W. F. Llye, Brantford; Corresponding Secretary, Frank Donovan, 31 Colborne street, Brantford; nights of meeting, second and fourth Friday of every month.

Brockville.

Name of Organization.—Lodge No. 208, Brotherhood of Railroad Trainmen; date organized 1886; membership, 48; average earnings per week, $14.00; number of working hours first five days and Saturday, 10 hours or 100 miles; total number employed at this business in this locality, about 75; cash benefits, sickness, $3.00 per week; at death or disability the Brotherhood of Railroad Trainmen pays to members $1,200; Grand Trunk Railway pays according to insurance from $250 to $2,000. We think the superannuation benefit would be a great benefit; Master, J. H. Kelly, Brockville, Ont.; Corresponding Secretary, Charles Keer, Brockville; nights of meeting, first Monday and third Sunday in every month.

Name of Organization.—Federal Labor Union (Laborers'); date organized, August 31st, 1900; membership, 20; average earnings per week, $7.50 to $9.00; number of working hours first five days, 10; number of working hours Saturday, 9 and 10; average number of days idle per member during year, 125; cause of idleness, lack of work in the winter; President, W. H. Boon, Brockville; Corresponding Secretary, E. A. Clement, Box 81, Brockville; nights of meeting, first and third Wednesday in every month.

Name of Organization.—International Typographical Union, No. 393; date organized, September 7, 1900; membership, 14; average earnings per week, $10; number of working hours first five days, 9; number of working hours Saturday, 9; total number employed at this calling in locality, 14; President, L. E. Murphy, Brockville; Corresponding Secretary, S. W. Bell, Box 100, Brockville; nights of meeting, first Monday of every month.

Chapleau.

Name of Organization.—Brotherhood of Locomotive Engineers, Div. 319; date organized, May, 1887; membership, 21; average earnings per week, $35.00; total number of locomotive engineers in locality, 25; do you carry on any special work for members, such as evening classes, etc.? Yes, instruction is given at lodge meetings in matters pertaining to our calling; President, Ernest M. Cryer, Chapleau; Corresponding Secretary, J. D. McAdam, Chapleau; nights of meeting, first and third Monday of every month.

COLLINGWOOD.

Name of Organization.—United Brotherhood of Carpenters and Joiners; date organized, July, 1900; membership, 20; average earnings per week, $10.50; number of working hours first five days, 10; number of working hours Saturday, 10; average number of days idle per member during year, 25; general cause of idleness, bad weather and lack of work; number of carpenters and joiners in this vicinity, about 130; difference in wages between union and non-union men is 10c per day; cash benefits, death, $400; it is intended, however, to establish other benefits as soon as the union grows stronger; President, W. J. Reid, Collingwood; Corresponding Secretary, J. V. Buffy, Collingwood, Ont.; nights of meeting, second and fourth Thursday in every month.

Name of Organization.—Federal Labor Union (Laborers); date organized, May 1st, 1901; membership, 20; average earnings per week, $7.50; number of working hours first five days, 10; number of working hours Saturday, 10; average number of days idle per member during year, 70 to 80; general cause of idleness, mills closing, steam boats tying up for the winter, and a general shortage all round; total number employed in this locality, 350 to 450; President, N. F. Highley, Collingwood; Corresponding Secretary, Albert Houghton, Collingwood; nights of meeting, second and fourth Wednesday in every month.

DUNDAS.

Name of Organization.—Lodge No. 69, International Association of Machinists; date organized, March 16th, 1900; membership, 40; average earnings per week, $10.50; number of working hours first five days, 10 1-2; number of working hours Saturday, 5; total number employed at this calling in locality, 99, not including apprentices; no union man receives less than 16c per hour, but some of the non-union men get only 13c per hour, the hours of labor are the same; cash benefits, sickness, $3.00 per week; death, $50.00; President, J. W. Dickson, Box 98, Dundas; Corresponding Secretary, William MacGregor, jun., Box 203, Dundas; nights of meeting, first and third Saturday in every month.

Name of Organization.—Amalgamated Woodworkers' International Union, No. 128, date organized, June 9th, 1900; average earnings per week, $8.25; number of working hours first five days, 10; number of working hours Saturday, 9; average number of days idle per member during year, 20; general cause of idleness, Saturday half holidays in the summer, stock-taking, repairing and public holidays; total number of woodworkers in locality, 35; there is no difference in the wages or hours of labor between union and non-union men; cash benefits, sickness, $3.00 per week; death, $75.00; total disability, $250.00; President, William Ball, Dundas; Corresponding Secretary, Samuel Patterson, Dundas; nights of meeting, every alternate Friday.

FORT WILLIAM.

Name of Organization.—Div. No. 243, Brotherhood of Locomotive Engineers; date organized, about 1884; membership, 16; number of engineers in locality, 26; cash benefits paid by Brotherhood, death, $750 to $4,000; President, William Blennerhassett, Fort William; Corresponding Secretary, John Whitehurst, Box 157, Fort William; nights of meeting, every Tuesday.

Name of Organization.—Lodge No. 309, International Association of Machinists; date organized, November 25th, 1900; membership, 12; average earnings per week, $14; number of working hours first five days, 10; number of working hours Saturday, 5 from May 1st to October 1st; 9 the remainder of the year; average number of days idle per member during year, 7; although last winter we were idle 10 days during the Christmas season on account of the dullness of business, and we were also on short time from December to April, that is, 7 1-2 hours per day; total number of machinists and fitters in locality, 13 journeymen, 5 apprentices; there is some difference here in the wages

and hours of labor, although it is not due to men not being members of the union, the hours of labor of the employees of the Canadian Northern Railway are at present 60 per week, and of the Canadian Pacific Railway, 55 per week, the latter railway pays 27c per hour to machinists, the Canadian Northern, 26c, while elsewhere the rate is 25c per hour; there is a library at the C. P. R. at Fort William, where the latest journals and the daily papers are open to members; President, James Booker, McDonald street, Fort William, Ont.; Corresponding Secretary, H. C. Carvell, Cumberland street, Port Arthur, Ont.; nights of meeting, first and third Friday of every month.

GALT.

Name of Organization.—Lodge No. 120, International Association of Machinists; date organized, November 25th, 1899; average earnings per week, $8.50; number of working hours first five days, 10; number of working hours Saturday, 5; total number of machinists in locality, 200; membership of union, 50; cash benefits, sickness, $2.00 per week: death, $50; President, Thomas Barnard, Galt; Corresponding Secretary, S. McLean, Galt, Ont.: nights of meeting, every second Monday.

GUELPH.

Name of Organization.—International Typographical Union, No. 391; date organized, July, 1900; membership, 26; average earnings per week, minimum, $9.00; number of working hours first five days, 9; number of working hours Saturday, 8; total number of typesetters in locality, 28; difference in hours of labor between organized and unorganized workers, about 6 per week; cash benefits, death, $65; President, A. A. Anderson, Guelph; Corresponding Secretary, O. R. Wallace, care The Mercury, Guelph; nights of meeting, first Thursday of every month.

Name of Organization—Brussel Carpet Weavers' Union; date organized, August 10th, 1900; membership, 10; average earnings per week, $10; number of working days first five days, 10; number of working hours Saturday, 5; average number of days idle per member during year, 80; cause of idleness, lack of orders, caused, it is said, by the preferential tariff being favorable to English manufacturers; total number of carpet weavers in locality, male, 20; female, 5; there is no diffierence in wages or hours of labor between union and non-union workers; no cash benefits are paid, as the union is not yet strong enough financially, but it is the intention to establish some in the near future; President, John Branford, care the City Hotel, Guelph; Corresponding Secretary, Ernest Lea, care the Western Hotel, Guelph; nights of meeting, every other Friday.

Name of Organization.—Journeymen Tailors' International Union, No. 297; date organized, April, 1900; membership, male, 27; female, 42; total number of tailors in locality, about 100; all the merchant tailors of this city employ union labor, so that conditions are equal, outside of these there are just a few repairers, etc.; cash benefits, death or funeral benefit is graded according to the length of membership from $40 to $100: President, James Thomas, Guelph; Corresponding Secretary, Thomas H. Gordon, Box 294, Guelph; nights of meeting, first and third Monday of every month.

Name of Organization.—Iron Moulders' International Union, No. 212; date organized, ——1871 ; membership, 66; number of working hours first five days, 10; number of working hours Saturday, 9; cash benefits, lack of employment dues are paid; sickness, $5.00 per week; death, from $150 to $200: President, Arthur McCulloch, Guelph; Corresponding Secretary, C. W. Dawson, Box 208, Guelph; nights of meeting, second and fourth Tuesday of every month.

Name of Organization.—Amalgamated Wood Workers' International Union, No. 111; date organized, March 14, 1900; membership, 127; average earnings per week, $7.50; number of working hours first five days, 10; number of working hours Saturday, some 9, but the greater number 10; average number of days idle per member during year, 40; general cause of idlenss, slackness of business, stock taking, etc.; total number of wood workers in locality, 300; cash benefits, death, $75.00; President, W. H. Readwin, Guelph;

Corresponding Secretary, J. Dandeno, Guelph; nights of meeting, first and third Tuesday of every month.

Name of Organization.—Bakers' and Confectioners' International Union; date organized, April 27, 1901; President, Clarence Liddell, Guelph; Corresponding Secretary, Andrew McGrath, Box 81, Guelph; nights of meeting, every second Saturday.

Name of Organization.—Bricklayers' and Masons' International Union; date organized, May, 1900; membership, 180; average earnings per week, $16.50; number of working hours first five days, 9; number of working hours Saturday, 9; average number of days idle per member during year, 100; general cause of idleness, no work in this line during the winter; total number of bricklayers, etc., in locality, 30; difference in wages between union and non-union members, 50c to 75c per day, and non members work 10 hours per day ; President, Joseph Shaw, Guelph; Corresponding Secretary, Henry Thatcher, Guelph; nights of meeting, second and fourth Thursday of every month.

Name of Organization.—Carriage and Wagon Makers' International Union, No. 78; date organized, July, 1901; membership, 20; average earnings per week, $9.00; female, $4.00; number of working hours first five days, 10; number of working hours Saturday, 9; total number employed at this calling in locality, male, about 300; female, 13; President, J. H. Parker, 109 Neeve street, Guelph; Corresponding Secretary, Alfred L. Eisel, Guelph; nights of meeting, scond and fourth Monday of every month.

Name of Organization.—Wine Clerks' Union; date organized, October 20, 1901; membership, 16; average earnings per week, $8.00; President, James W. Williams, Commercial Hotel, Guelph; Corresponding Secretary, David Black, Western Hotel, Guelph; nights of meeting, first Sunday of every month.

Name of Organization.—Journeymen Barbers' International Union; date organized, June 4, 1901; membership, 12; average earnings per week, $9.00; number of working hours first five days, 10; number of working hours Saturday, 14; total number of journeymen barbers in locality, 22; cash benefits, sickness, $5.00 per week; death, $60.00; President, August Mogk, Wellington Hotel, Guelph; Corresponding Secretary, W. H. Fairlay, Macdonell street, Guelph; nights of meeting, second Tuesday of every month.

Hamilton.

Name of Organization —United Brotherhood of Leather Workers on Horse Goods, L. U., No. 73; date organized, May, 1900; membership, 19; average earnings per week, $6.50; number of working hours first five days, 10; number of working hours Saturday, 10; total number of leather workers in locality, between 40 and 50; there is no difference in wages or hours of labor between organized and unorganized workers; cash benefits, sickness, $5.00 per week; death, funeral expenses; President, William Berry, Hamilton; Corresponding Secretary, Norman Creen, 109 Main street east, Hamilton; nights of meeting, second and fourth Tuesday of every month.

Name of Organization.—Amalgamted Society of Carpenters and Joiners; date organized, June 4th, 1860; membership, 28; average earnings per week, $12.37 1-2; number of working hours first five days, 10; number of working hours Saturday, 5; difference between union and non-unionists workers is that union members get time and a half for all overtime, while non-unionists do not; cash benefits, lack of employment, $2.50 per week; sickness, $3 per week; death, $60; superannuation, $22.75 every three months; President, Robert Somerville, 485 Cannon street, east; Corresponding Secretary, William Disher, 80 Catherine street, north; nights of meeting, every alternate Friday.

Name of Organization.—International Brotherhood of Painters, Decorators and Paper Hangers, No. 205; date organized, June 26th, 1900; membership, 53; average earnings per week, $9.00; number of working hours first five days, 9; number of working hours Saturday, 5; average number of days idle per member during year, 20; cause of idleness, cold weather and the slackness in the building trades in the winter; total number of painters, etc., in locality, 93; of which 53 are union men; difference in wages and hours of labor between union and non-union men is that unionists work 50 hours per week, and receive 20c and 22c per hour, while non-unionists work 60 hours per

week and receive only an average wage of 17 1-2c per hour; cash benefits, death, $100 and $150 on one and two years' membership, also $50 on death of wife after one year's membership; permanent disability benefit of $100 for one year's membership, and $150 for two years' membership, subject to medical advice; President, James Smith, Queen street north, Hamilton; Corresponding Secretary, W. A. Turk, 519 James street north, Hamilton; nights of meeting, first and third Monday in the month; local union, No. 205, claims the distinction of being the only local, so far as is known, which is in possession of and uses a union label of their own design in Canada in the painting trade.

Name of Organization.—Cigarmakers' International Union, No. 55; date organized, September 12th, 1865; membership, male, 204; female, 5; average earnings per week, $10.00; number of working hours first five days, 8; number of working hours Saturday, 4; average number of days idle per member during year, 14; general cause of idleness, stock-taking; total number of cigar makers in locality, 209, and all are members of the union; cash benefits, lack of employment, $3.00 per week; sickness, $5.00 per week, death, $550; President, A. LaFrance, 56 Chatham street, Hamilton; Corresponding Secretary, Thomas O'Dowd, P.O. Box 35; nights of meeting, the second Wednesday of the month.

Name of Organization.—Boot and Shoe Dayworkers' International Union, No. 232; date organized, November 10th, 1900; membership, 42; average earnings per week, $9.00; number of working hours first five days, 10; number of working hours Saturday, 5; average number of days idle per member during year, 6; cause of idleness, stock-taking; cash benefits, sickness, $3.00 per week; death, $50.00; President, E. W. A. O'Dell, 189 Cannon street, Hamilton; Corresponding Secretary, Arthur B. Snider, 83 Jackson street west, Hamilton; nights of meeting, first Thursday of every month.

Name of Organization.—Boot and Shoe Workers' International Union, No. 234 (Shoe Fitters); date organized, Nov. 24th, 1900; membership, male, 1; female, 86; average earnings per week, male, $18.00; female, $3.00 per week; number of working hours first five days, 10; number of working hours Saturday, 5; average number of days idle per member during year, 40; general cause of idleness, stock-taking and depression during sample time; total number employed at this business in locality, 103 (this is the number in the stitching room only); there are no non-union shoe workers in Hamilton, as there is only one shoe manufacturing factory in the city; cash benefits, sickness, $3.00 per week; death, $50.00, if a member of the organization for seven months in good standing, and $100 after two years' membership, if in good standing; President, Miss Annie McDonald, 232 Duke street, Hamilton; Corresponding Secretary, Miss Annie Gibson, 149 Hess street north, Hamilton; nights of meeting, the fourth Thursday of every month.

Name of Organization.—International Association of Machinists, Lodge No. 414; date organized, March 1st, 1900; membership, 75; average earnings per week, $11.00; number of working hours first five days, 10; number of working hours Saturday, 5; average number of days idle per member during year, 40, when the shops were shut down for lack of work; total number of machinists in locality, 250; difference in wages between union and non-union men is 10c to 20c per day in favor of the association; dues are paid in case of lack of employment or sickness, and at death $50; President, William Kerns; Corresponding Secretary, R. T. Land, 173 Oak avenue, Hamilton; nights of meeting, alternate Fridays.

Name of Organization.—Bartenders' International Union, No. 197; date organized, October 29th, 1899; membership, 51; average earnings per week, $9.00; number of working hours first five days, 8; number of working hours Saturday, 10; total number of bartenders in locality, 80; difference in wages between union and non-union workers, from $5 to $10 per week; President, M. Meston, New American Hotel, King street west, Hamilton; Corresponding Secretary, A. Spellessay, 103 King street east, Hamilton; nights of meeting, first and third Sunday of every month.

Name of Organization.—Garment Workers' International Union, No. 124; date organized, April, 1898; membership, 23; average earnings per week, $11.00; number of working hours first five days, 10; number of working hours Saturday, 5, with full day's

pay; total number of garment workers in locality, male, about 116; female, about 12; President, Christian Kruss, 64 Catherine street, south, Hamilton; Corresponding Secretary, Cyrus P. Olliver, 145 Grant avenue, Hamilton; nights of meeting, fourth Wednesday of every month.

Name of Organization.—Div. No. 107, Amalgamted Association of Street Railway Employees of America; date organized, April 9th, 1899; average earnings per week, $9.00; number of working hours first five days, 10; number of working hours Saturday, 10; total number of street railway employees in locality, 130; difference in wages and hours of labor between union and non-union employees, from 2 to 4 hours, and from 12 1-2c to 13c per day; cash benefits, death, $75.00, there is no superannuation fund, but a voluntary subscription of a sum voted out of the funds is given to a member in distress; President, John W. Ogilvie, 17 Oak avenue, Hamilton; Corresponding Secretary, Albert Webber, 6 Sanford avenue, Hamilton; nights of meeting, first and third Saturdays.

Name of Organization.—Bricklayers' and Masons' International Union, No. 1, of Ontario; date organized, 1881; membership, 120; average earnings per week, $8.25; number of working hours first five days, 9; number of working hours Saturday, 5; average number of days idle per member during year, 167; cause of idleness, rain and bad weather, and sometimes dullness of trade; total number of bricklayers and masons in locality, 120; cash benefits, death, $100; there is no special work carried on for the members, but the hall in which meetings are held is open every day during the winter, and members may there have access to the daily papers and the trade journals; President, John Seaman, 28 West avenue north, Hamilton; Corresponding Secretary, William J. Whitelock, 39 West avenue, north, Hamilton; nights of meeting, every Thursday night.

Name of Organization.—Local Union, No. 167, United Associaton of Plumbers, Steam and Gas Fitters; date organized, July, 1899; membership, 40; average earnings per week, $12.00; number of working hours first five days, 10 for 6 months and 8 for the other 6 months; number of working hours Saturday, 5 from May 1st to October 31st; total number of plumbers, etc., in locality, 41; difference in wages between union and non-union men, 25c per day; cash benefits, sickness, $3.00 per week, death, amount not stated; President, Frank Drake, 106 Gibson avenue, Hamilton; Corresponding Secretary, A. W. Harris, 28 Smith avenue, Hamilton; nights of meeting, first and third Wednesday.

Name of Organization.—Hamilton Teamsters' Association; date organized, June 1st, 1899; membership, male, 93; female, 3; average earnings per week, $12.00; female, $12.00; number of working hours first five days, 9; number of working hours Saturday, 9; average number of days idle, not stated, but there is more work in summer than in winter on account of the character of the work; total number of teamsters in locality, over 300; President, J. H. Larkin, 612 Barton street east, Hamilton; Corresponding Secretary, J. H. R. Taylor, 41 King street, Hamilton; nights of meeting, second and fourth Thursday.

Name of Organization.—Journeymen Horsehoers' International Union, No. 72 membership, 18; average earnings per week, $9.60; number of working hours first five days, 10; number of working hours Saturday, 9; total number employed at this calling in locality, 57; difference in wages between organized and unorganized workers, $3.00 per week; President, B. H. Lewis, 28 Market street, Hamilton; Corresponding Secretary, C. E. Groves, 40 York street, Hamilton; nights of meeting, second and fourth Wednesdays.

Name of Organization.—Journeymen Bakers' and Confectioners' International Union, No. 79; date organized, June 2nd, 1900; membership, 35; average earnings per week, $11.00; number of working hours first five days, 10; number of working hours Saturday, 10 to 12; average number of days idle per member during year, 5; cause of idleness, dullness of trade in winter; total number of bakers, etc., in locality, 35; cash benefits, $5.00 per week; death, $50 to $100; President, William McLure, Hamilton; Corresponding Secretary, Ernest Kelly, 310 Robert street, Hamilton; nights of meeting, every Saturday.

Name of Organization.—Tobacco Workers' International Union; date organized, August 24th, 1899; membership, male, 112; female, 51; average earnings per week,

male, $9.00; female, $4.00; number of working hours first five days, 10 in summer, 9 1-2 in winter; number of working hours Saturday, 5 in summer, 7 1-2 in winter; average number of days idle per member during year, from 40 to 60; general cause of idleness, stock-taking for two weeks, warm, wet weather and too many hands for the amount of sales; total number of tobacco workers in locality, male, 120; female, 57; cash benefits, strike, $3.00 per week; sickness, $3.00 per week; death, $50.00; President, W. Wheaton, 190 Hess street north, Hamilton; Corresponding Secretary, D. McLean, 7 Richmond street, Hamilton; nights of meeting, second and fourth Monday in every month.

Name of Organization.—United Brotherhood of Carpenters and Joiners; date organized, January, 1882; membership, 50; average earnings per week, $12.37; number of working hours first five days, 10; number of working hours Saturday, 5; average number of days idle per member during year, about 90; cause of idleness, the severity of the winter stops the building trade for the winter months; total number of carpenters in locality, about 200; difference in wages and hours of labor between organized and unorganized workers, from 50c to 75c per day; cash benefits, death, $200.00; disability, $400.00; President, E. Hancock, 389 McNab street north, Hamilton; Corresponding Secretary, William Brass, 176 Market street, Hamilton; nights of meeting, first and third Thursday of every month.

Name of Organization.—Journeymen Tailors' International Union, No. 149; date organized, 1892; membership, male, 60; female, 15; average earnings per week, male, $10.25, female, $5.00; number of working hours first five days, 10; number of working hours Saturday, 12; average number of days idle per member during year, 45; cause of idleness, slackness of trade between the seasons; total number of journeymen tailors in locality, male, 80; female, 45; difference in wages and hours of labor between union and non-union workers, non-union workers, male and female, get about 15 per cent. less; cash benefits, death, $100.00; the international organization has under its consideration the possibility of making provision in the near future for "out of work," "sick" and "superannuation" benefits, on the same principle as the International Cigarmakers' Union; do you carry on any special work for members ? yes; discussions on social and economic questions are held; President, John Lord, 80 Gore street, Hamilton; Corresponding Secretary, Hugh Robinson, 42 James street north, Hamilton; nights of meeting, last Monday in every month.

Name of Organization.—Iron Moulders' International Union, No. 26; date organized, 1862; membership, 310; average earnings per week, $13.50; number of working hours first five days, 10; number of working hours Saturday, 10; average number of days idle per member during year, 75; cause of idleness, the unjust laws which make it legal for the capitalists to rob the producer of his purchasing power; total number of iron moulders in locality, 310; all the moulders in the locality are members of the organization; cash benefits, sickness, $5.00 for 13 weeks; death, $250.00; President, Thomas H. Church, corner Pearl and Peter streets, Hamilton; Corresponding Secretary, William Hugo, 287 Mary street, Hamilton; nights of meeting, every Wednesday evening.

Name of Organization.—Amalgamated Association of Sheet Metal Workers, No. 61; date organized, August, 1899; membership, 40; average earnings per week, $12.00; number of working hours first five days, 10; number of working hours Saturday, 5; total number of sheet metal workers in locality, 75; difference in wages between organized and unorganized workers, 2 1-2c per hour; do you carry on any special work for members ? yes; trade instruction; President, John Henderson, Barton street east, Hamilton; Corresponding Secretary, W. H. Dennis, 270 East avenue north, Hamilton; nights of meeting, second and fourth Friday of every month.

Name of Organization.—Wood Workers' International Union, No. 37; date organized, June 5th, 1900; membership, 26; average earnings per week, $9.13 1-2; number of working hours first five days, 10; number of working hours Saturday, 5; average number of days idle per member during year, about 27; cause of idleness, slack season and holidays; cash benefits, death, $75.00; President, H. H. Harper, 298 Jackson street west, Hamilton; Corresponding Secretary, Charles Middleton, 81 Gore street, Hamilton; nights of meeting, first and third Tuesday of every month.

Name of Organization.—Metal Polishers', Buffers' and Platers' International Union, No. 26; membership, 13; average earnings per week, $10.00; number of working hours first five days, 10; number of working hours Saturday, 9; average number of days idle per member during year, 100, on account of the works being closed down for that period; total number of polishers, etc., in locality, 60; cash benefits, death, $100; President, Henry Murdock, 218 Barton street east, Hamilton; Corresponding Secretary, J. Shower, 372 Cannon street east, Hamilton; nights of meeting, first and third Wednesday of every month.

Name of Organization.—Brotherhood of Locomotive Firemen, Lodge 151; date organized, December 17, 1893; membership, average earnings per week, $12.50; number of working hours first five days, 12 to 15; number of working hours Saturday, 12 to 15; total number of firemen in locality, 80; cash benefits, death, $400, $500, $1,000, $1,500; if a member is disabled so as to be unable for work he receives his insurance; nights of meeting, first and third Sunday of every month.

Name of Organization.—Federal Labor Union, No. 10 (City Fire Department),: date organized, January, 1900; membership, 38; average earnings per week, $12.00; total number of firemen in locality, 38; cash benefits, death, $50; President, R. Wilson, 224 Canada street, Hamilton; Corresponding Secretary, Robert Aitchison, 52 George street, Hamilton; nights of meeting, first Monday of every month.

Name of Organization.—Journeymen Barbers' International Union; date organized, October 20, 1900; membership, 55; average earnings per week ,$9.00; number of working hours first five days, 10; number of working hours Saturday, 14; total number of barbers in locality, 60; cash benefits, sickness, $5.00 per week; death, $60.00; President, Harry Halford, 59 South John street, Hamilton; Corresponding Secretary, James L. Stickel, 131 West Stuart street, Hamilton; nights of meeting, first and third Monday of every month.

Name of Organization.—International Typographical Union, No. 129; date organized, February, 1869; membership, 80; number of working hours first five days, 9 hours, 48 minutes; number of working hours Saturday, 5; total number employed at our calling in locality, 80; cash benefits, death, $65; President, George H. Richmond, Grippen & Kidner's job office, King William street, Hamilton; Corresponding Secretary, John J. Burns, 280 John street north, Hamilton; nights of meeting, second Saturday of every month.

Name of Organization.—Broom Makers' International Union, No. 9: date organized, May 15, 1900; membership, 14; average earnings per week, $12.00; number of working hours first five days, 10; number of working hours Saturday, 9; average number of days idle per member during year, 7; general cause of idleness, stock-taking; total number of broom makers in locality, 20; difference in wages between union and non-union members, about 10 per cent.; President, E. Norton, 60 Wentworth street north, Hamilton; Corresponding Secretary, F. Vallie, 30 Wood street west, Hamilton; nights of meeting, second Monday of every month.

Kingston.

Name of Organization.—Federal Labor Union, No. 7,448 (Builders' Laborers); date organized, May 12th, 1899; membership, 80; average earnings per week, $9.00; number of working hours first five days, 9; number of working hours Saturday, 9; average number of days idle per member during year, 118; general cause of idleness, no work in the cold weather; total number employed at this calling in this locality, 80; President, John Burns, 65 Queen street, Kingston; Corresponding Secretary, John Donovan, 97 Bagot street, Kingston; nights of meeting, first and third Wednesday of every month.

Name of Organization.—United Association of Journeymen Plumbers, Steam and Gas Fitters, No. 221 ; date organized, August, 1900; membership, 25; average earnings per week, $12.00; number of working hours first five days, 9; number of working hours Saturday, 9; average number of days idle per member during year, 30; cause of idlesness, dulness of trade in the winter; total number of plumbers, etc., in locality, 25, and all are members of the union: cash benefits, none as yet, but we are working out a plan to

pay benefits in case of lack of employment, sickness, death and superannuation; President, James J. Bruce, Kingston Station, Kingston; Corresponding Secretary, John Conley, 143 Pine street, Kingston; nights of meeting, first and third Tuesdays of every month.

Name of Organization.—Iron Molders' International Union, No. 252; date organized, February 26th, 1899; membership, 20; average earnings per week, $12.10; number of working hours first five days, 10; number of working hours Saturday, 5; average number of days idle per member during year, 50; average number of days idle per member during year, 50; total number of iron molders in locality, 20, all being members of the International organization; cash benefits, lack of employment, members are not obliged to pay any dues to the union while out of employment; sickness, $5.00 per week; death, $100 to $200; President, Chas. Rutherford, Brock street, Kingston; Corresponding Secretary, William Varney, 27 King street, Kingston; nights of meeting, first and third Monday of every month.

Name of Organization.—Branch No. 10, Masons', Bricklayers and Plasterers' International Union; date organized, April 5th, 1900; membership, 57; average earnings per week, $12.00; number of working hours first five days, 9; number of working hours Saturday, 9; average number of days idle per member during year, 130; general cause of idleness, frost and unfavorable weather, and work coming late in the spring; total number of masons, etc., in locality, 60; difference in wages and hours of labor between organized and unorganized workers, union men work 9 hours per day, non-union men 10, union men receive 33 1-3c per hour, non-union men 25c per hour; there is a reading room for the benefit of members; President, William Clugston, 394 Brock street, Kingston; Corresponding Secretary, Joseph Wilson, Rideau and Bay streets, Kingston; nights of meeting, second and fourth Tuesday of the month.

Name of Organization.—Journeymen Tailors' International Union, No. 263; date organized, April 29th, 1901; membership, male 18, female 27; average earnings per week, male $8 to 10, female $4 to $6; number of working hours first five days, 10; number of working hours Saturday, 10; total number of journyemen tailors in locality, male 29, female 75; cash benefits, death, $25 after six months' membership, and the payment of six months' dues, with a gradual increase after stated periods of time; President, Wm. James, 203 University avenue, Kingston; Corresponding Secretary, William Bucknell, 402 Montreal street, Kingston; nights of meeting, every Monday night, trying to get in new members.

Name of Organization.—United Brotherhood of Painters, Decorators and Paperhangers, No. 114; date organized, May 24th, 1900; membership, 34; average earnings per week, $8.00; number of working hours first five dyas, 10; number of working hours Saturday, 9; average number of days idle per member duing year, 90; general cause of idleness, dull times; total number of painters, etc., in locality, 50; cash benefits, death, $150.00; President W. J. Savage, 18 Vine street, Kingston; Corresponding Secretary, Frank Gorgett, 12 Redan street, Kingston; nights of meeting, first and third Mondays.

Name of Organization.—Laborers' Protective Union, No. 8,663; date organized, September 15th, 1900; membership, 67; average earnings per week, $6.00 to $8.00; number of working hours first five days, 9; number of working hours Saturday, 9; average number of days idle per member during year, 90; general cause of idleness, scarcity of work during the winter months; total number of laborers, etc., in locality, from 690 to 700 difference in wages and hours of labor between organized and unorganized workers, union men work 9 hours and receive $1.25 and $1.50 per day, while non-union men work 10 hours for $1.00 per day; cash benefits, lack of employment, whatever the union can afford to pay; sickness, no stated benefit; death, members are buried at the expense of the union; there is no superannuation fund, but the union will do what it can for members as far as the funds allow; President, J. O. Saunders, 159 Nelson street, Kingston; Corresponding Secretary, Walter S. Shufflebotham, 466 Montreal street, Kingston; nights of meeting, first and third Saturdays of every month.

Name of Organization.—Amalgamated Sheet Metal Workers' International Association, No. 117; date organized, August 24th, 1900; membership, 19; average earnings

per week, $11.50; number of working hours first five days, 9; number of working hours Saturday, 9; average number of days idle per member during year, 30; general cause of idleness, slackness of trade; total number of sheet metal workers in locality, 23; all are union men except the foremen; President, William Patterson, cor. King and Centre streets, Kingston; Corresponding Secretary, Charles Harris, 370 Bagot street, Kingston; nights of meeting, second and fourth Friday of every month.

Name of Organization.—Amalgamated Association of Streeet Railway Employees; date organized, May 31st, 1900; membership, 29; average earnings per week, $6.50; number of working hours first five days, 15; number of working hours Saturday, 15; total number of street railway employees in locality, 29; difference in wages and hours of labor between organized and unorganized workers, 25c per day; President, Peter Ryan, Ellis street, Kingston; Corresponding Secretary, W. A. McCann, 27 John street, Kingston; nights of meeting, first and third Sundays.

Name of Organization.—Amalgamated Society of Engineers, Branch No. 560; date organized, 1850; membership, 11; average earnings per week ,$12.00; number of working hours first five days, 10; number of working hours Saturday, 5; average number of dave idle per member per year, 36; general cause of idleness, suspension of works; total number employed as engineers, machinists, fitters, etc., in locality, ; difference in wages and hours of labor between organized and unorganized workers about 10 per cent, difference in wages in favor of organized workers; cash benefits, lack of employment, $2.50 per week; sickness, $2.50 per week; death, $60; superannuation, from $1.75 to $2.50 per week, according to the length of time in the society; President, Richard Bunt, cor. of North and Bagot streets, Kingston; Corresponding Secretary, John Lovick, 152 University avenue, Kingston; nights of meeting, every Wednesday.

Name of Organization.—Limestone City Typographical Union, No.204; date organized, 1886; membership, 25; average earnings per week, $12.00; number of working hours first five days, 10; number of working hours Saturday, 9; total number employed at this calling in locality, 25; difference in wages and hours of labor between union and non-union men, none, as there are no non-union printers in Kingston; cash benefits, death $65; President, Edward Ball, 364 Barrie street, Kingston; Corresponding Secretary, Samuel Carson, 220 University avenue, Kingston; nights of meeting, last Thursday of every month.

Name of Organization.—Ironworkers' and Helpers' International Union, No. 8,412; date organized, May 10, 1900; membership, about 185; average earnings per week, $8.25; number of working hours first five days, 10; number of working hours Saturday, 5 in the summer and 9 in winter complete's a day's pay; total number of ironworkers and helpers in locality, about 200; difference in wages between union and non-union men, 10c per day; cash benefits, sickness, exemption from dues, death, a reasonable allowance: "our monthly dues are so small that as yet we cannot definitely grant benefits, but we are making every effort to benefit and study the welfare of our organization, according to our funds"; do you carry on any special work for members, such as reading room, etc? Yes, and the various rooms are comfortably furnished to meet the demands of our workmen; President, John Flanigan, corner William and Barrie streets, Kingston; Corresponding Secretary, Albert J. Meredith, 52 Division street, Kingston; nights of meeting, second and fourth Wednesday of every month.

Name of Organization.—United Brotherhood of Carpenters and Joiners; date organized, June 26, 1899; membership, 68; average earnings per week, $12.00; number of working hours first five days, 9; number of working hours Saturday, 9; average number of days idle per member during year, 60; general cause of idleness, cold and bad weather; total number of carpenters, etc., in locality, 100; difference in wages between union and non-union members, union men receive $2.00 per day, non-union men $1.25 per day; cash benefits, sickness $3.00 per week, death $200; President, Nat. Smith, Collingwood street, Kingston; Corresponding Secretary, H. Sallsbury, Barriefield, Ont.; nights of meeting, second and fourth Monday of every month.

LINDSAY.

Name of Organization.—Brotherhood of Railroad Trainmen, Lodge No. 308; date organized, May, 1889; membership, 65; total number of trainmen in locality, 80 to 90; cash benefits, sickness $3.00 per week, death from $250 to $300. "Do you carry on any special work for members?" "The Grand Trunk has a reading room, of which trainmen have the use." Master, William Hammill, Lindsay; Corresponding Secretary, H. M. Lockwood, Lindsay; nights of meeting, second and fourth Sunday.

Name of Organization.—Brotherhood of Locomotive Firemen, Lodge No. 136; membership, 30; average earnings per week, $11.00; number of working hours first five days, sometimes 16 hours a day for seven days, when very busy; total number of firemen in locality, 34; cash benefits, death, class insurance, Master, W. Chambers, Lindsay; Corresponding Secretary, W. Dolby, Lindsay; nights of meeting, alternate Sundays.

LONDON.

Name of Organization.—Brotherhood of Painters, Decorators and Paperhangers, No. 97; date organized, July 23rd, 1895; average earnings per week, $10.80; number of working hours first five days, 9; number of working hours Saturday, 8; total number of painters, etc., in locality, about 75; difference in wages between union and non-union men, 2c to 5c per hour; cash benefits, death $50 to $150; President, W. F. Graham, 528 South street, London, Corresponding Secretary, J. W. McCandless, 121 Albert street, London; nights of meeting, second and fourth Thursdays of every month.

Name of Organization.—Amalgamated Society of Carpenters and Joiners; date organized, June, 1860; membership, 30; average earnings per week, $10.50; number of working hours first five days, 9; number of working hours Saturday, 7½; average number of days idle per member during year, not known; general cause of idleness, dulness of trade, and not much building going on in the severe cold weather; total number of carpenters in locality, about 250 to 300; cash benefits, lack of employment $2.50 per week, sickness $3.00 per week, death $60, superannuation $2.00 per week after being a member for 25 years, and over 50 years of age, and unable to earn half of average wages; President, J. H. Ward, Albion street west, London; Corresponding Secretary, John Lanton, 379 Waterloo street, London; nights of meeting, alternate Wednesdays.

Name of Organization—Cigar Makers' International Union, No. 278; date organized, January 1st, 1899; membership, male 147, female 10; average earnings per week, male $7.00, female $5.00; number of working hours first five days 8; number of working hours Saturday, 6; average number of days idle per member during year, 14; general cause of idleness, stock-taking by the firms; total number of cigar makers in locality, male 347, female 210; difference in wages and hours of labor between union and non-union workers, male $1.00 per week, female $1.50 per week, union workers have an eight-hour day, while the non-union workers have a ten-hour day; cash benefits, lack of employment $3.00 per week up to $54 per year, sickness $5.00 per week for 13 weeks; death $50, after one year's membership, $200 after five years' membership, $350 after ten years' membership, $550 after fifteen years' membership; President, James Walsh, 155 Albert street, London; Corresponding Secretary, Chas. J. Meaden, 186 Kent street, London; nights of meeting, first and third Thursdays of every month.

Name of Organization.—Bricklayers' and Masons' International Union; date organized, 1863; total membership, 58; average earnings per week, $11.00; number of working hours first five days, 8; number of working hours Saturday, 7; average number of days idle per member per year, 120; general cause of idleness, bad weather and lack of work; total number of bricklayers, etc., in locality, 60; difference in wages and hours of labor between organized and unorganized workers, 25c per day; cash benefits, death $50; President, J. Clark, 400 Clarence street ,London; Corresponding Secretary, H. Rymill, 491 Oxford street, London; nights of meeting, every alternate Tuesday.

Name of Organization—International Brotherhood of Electrical Workers; date organized, April 8, 1900; President, William Cook, 38 Miles street, London; Corresponding Secretary, D. R. Marshall, 758 Richmond street, London; nights of meeting, first and third Friday of every month.

Name of Organization.—Broom Makers' International Union, No. 74; date organized, September 30, 1900; membership, 25; total number of broom makers in locality, 27; President, William Rae, 11 Oxford street, London; Corresponding Secretary, Charles Eggett, 721 Princess avenue, London; nights of meeting, first and third Tuesday of every month.

Name of Organization.—Brotherhood of Locomotive Firemen, Lodge No. 117; date organized, 1872; membership, 48; average earnings per week, $11.45; average number of days idle per member during year, 6; general cause of idleness, slackness in traffic, either passenger or freight; total number employed as firemen in locality, about 60 on the Grand Trunk Railway; cash benefits, death $15, disability $15. "Do you carry on any special work for members?" "There is an educational club with roooms supported jointly by engineers and firemen;" nights of meeting, first Tuesday evening and third Sunday afternoon of every month.

Name of Organization.—Order of Railway Conductors, Div. 16; date organized, ——; membership, 41; average earnings per week, $20; cash benefits, death $1,000 to $3,000, according to class; nights of meeting, first and thrd Sunday of every month.

Midland.

Name of Organization.—Longshoremen's International Union, No. 199; date organized, August 2nd, 1900; membership, 130; average earnings per week, $10.00 to $12.00; number of working hours first five days and Saturday, "we work to best advantage to give the boats quick despatch"; average number of days idle per member during year, ——; general cause of idleness, close of navigation, when the members go to the lumber camps, or cut wood; difference in wages and hours of labor between union and non-union workers, no non-union workers on the boats; common labor at sawmills, $1.25 per day of 10½ hours; corporation or other works, $1.50 per day of 10 hours; cash benefits, in case of accident a subscription is taken up for the benefit of the injured member; "Do you carry on any special work for members, such as evening classes, etc.?" "No, in the summer a large number are working at nights, and in winter they are away in the lumber camps; no meetings of the union are held after November; President, William Clegg, Midland; Corresponding Secretary, D. A. Hall, Midland; nights of meeting, second and fourth Monday of the month.

North Bay.

Name of Organization.—Brotherhood of Railroad Trainmen, Lodge No. 249; date organized, 1887; membership, 80; average earnings per week, $15; number of working hours first five days, 8; number of working hours Saturday, —; average number of days idle per member during year, 100; general cause of idleness, waiting turn out; total number of trainmen in locality, 100; Master, John Russell, North Bay; Corresponding Secretary, D. Dewan, North Bay; nights of meeting, second and fourth Thursday.

Name of Organization.—International Association of Machinists, Lodge No. 413; date organized, July, 1900; membership, 13; average earnings per week, $12.60; number of working hours first five days, 10; number of working hours Saturday, 10; total number of machinists in locality, 8; cash benefits, death, $50.00; President, Fred. Ronaldson, North Bay; Corresponding Secretary, Thomas Hinds, North Bay; nights of meeting, first and third Monday.

Name of Organization.—Order of Railway Conductors, No. 242; date organized, March 13th, 1889; membership, 19; average earnings per week, $22.00; number of working hours first five days, subject to duty at all times, Sundays included; cash benefits, death $1,000 to $5,000; Chief Conductor, S. N. Berry, North Bay; Corresponding Secretary, H. A. Washburn, North Bay; nights of meeting, first and third Monday of every month.

Name of Organization.—Brotherhood of Locomotive Engineers, Div. 308; date organized, ——; membership, 33; average earnings per week, $20; total number of engineers in locality, 50; cash benefits, death $750, $1.500, $3,000 and $4,000; Chief Engineer, Oscar Barnhart, North Bay; Corresponding Secretary, James Devine, North Bay; nights of meeting, first and third Monday of every month.

OTTAWA.

Name of Organization.—United Brotherhood of Carpenters and Joiners, No. 674, Date organized, October 3rd, 1900; membership, 50; average earnings per week, $15; number of working hours first five days, 9; number of working hours Saturday, 9; average number of days idle per member during year, 30 to 40; general cause of idleness, little doing in trade in the winter months; total number of carpenters, etc., in locality, 400 to 500; difference in wages and hours of labor between union and non-union workers, none as yet, the organization being so recent; cash benefits, death $100 to $200, total disability benefit of from $100 to $200, according to the length of membership, also a wife's funeral benefit of from $25 to $50; no special work as yet is carried on for members, but it is the intention of the union to do something in this line during 1901; President, William G. Adamson, 156 Friel street, Ottawa: Corresponding Secretary, I. E. Cross, 486 Gladstone avenue, Ottawa: nights of meeting, first and third Monday of every month.

Name of Organization.—Letter Carriers' Assembly, K.O.L.—Date organized, March 4th, 1901; membership, 24; average earnings per week, paid monthly, from $30 to $50; number of working hours first five days, irregular; number of working hours Saturday, irregular; total number of letter carriers in locality, 41; President, M. F. Fagan, Hintonburg, Ont.; Corresponding Secretary, M. A. Demers, 47 St. Andrew street, Ottawa: nights of meeting, first Tuesday of every month.

Name of Organization.—United Association of Plumbers, Steam and Gas Fitters, No. 71; date organized, 1888; membership, 59; average earnings per week, $13.50; number of working hours first five days, 9; number of working hours Saturday, 9; average number of days idle per member during year, 60; total number of plumbers, etc., in locality, 59; cash benefits, lack of employment, $10, if needed; sickness, $10; death, $59; President, M. O'Connell, 204 Somerset street east, Ottawa; Corresponding Secretary, Joseph Hurtbouise, 289 St. Andrew street, Ottawa; nights of meeting, second and fourth Monday of every month.

Name of Organization.—Builders' Laborers' International Protective Association.—date organized,1889; membership, 50; average earnings per week, $9.50; number of working hours first five days,9; number of working hours Saturday, 5; average number of days idle per member during year, 120; general cause of idleness, lack of work in the winter; difference in wages and hours of labor between union and non-union workers, 21c per day and four hours per week, in favor of union men; cash benefits, death $50; President, J. Burroughs, 442 St. Patrick street, Ottawa; Corresponding Secretary, Thomas Rosborough, 426 Maria street, Ottawa; nights of meeting, second and fourth Thursdays of every month.

Name of Organization.—International Brotherhood of Bookbinders, No. 65—Date organized, September, 1900; average earnings per week, $12.00; number of working hours first five days, 10; number of working hours Saturday, 5; total number of bookbinders in locality, male 60 to 65, female 150; President, F. W. Stewart, care J. Hope & Sons, Sparks street, Ottawa; Corresponding Secretary, A. F. Cottee, 257 Bolton street, Ottawa; nights of meeting, hird Friday of every monh.

Name of Organization.—Commercial Union (Clerks); date organized, 1891; membership, 100; average earnings per week, $9.00; number of working hours first five days, 9; number of working hours Saturday, 13; total number of clerks in locallty, male 250, female about 150; President, Napoleon Mercier, 263 Water street, Otttawa; Corresponding Secretary, Adolphe Leclerc, 277 Clarence street, Ottawa; nights of meeting, second and fourth Monday of every month.

Name of Organization.—International Printing Pressmen's Union, No. 5; date organized, January 20th, 1879; membership, 23; average earnings per week, vary very much, the union scale being $13.00, but in the Government Printing Bureau printers receive $14.50 per week, while some of the members of the union receive $14.00, $15.00 and $16.00 per week; number of working hours first five days, 10; number of working hours Saturday, 4; President, W. P. Webb, 197 Slater street, Ottawa; Corresponding Secretary, Alfred K. Larden, 327 Bell street, Ottawa; nights of meeting, second Monday of each month.

Name of Organization.—International Typographical Union, No.102; date organized, 1867; membership, male 299, female 2; average earnings per week, male $13.00, female $12.50; number of working hours first four days, 8½, Friday 9; number of working hours Saturday, 5; average number of days idle per member during year, 20; total number employed at this business in our locality, male 299, female 2; cash benefits, sickness $4.00 per week; death, $200; President, A. E. Sanderson, 206 Gloucester street, Ottawa; Corresponding Secretary, J. A. Murphy, 412 McLeod street, Ottawa; nights of meeting, first Saturday of every month.

Name of Organization.—Brotherhood of Locomotive Engineers; date organized, April 1st, 1895; membership, 59; average earnings per week, $21.50; cash benefits: "Insurance in connection with our organization pays policies of $4,500, $3,000, $1,500 and $750 in case of death, loss of one or both eyes, and in case of loss of one or both hands or feet; nights of meeting ,second and fourth Sunday of every month at 2 p.m.

Name of Organization.—Iron Molders' International Union, No. 280; date organized, October 8th, 1891; membership, 35; average earnings per week, $13.20; number of working hours first five days, 10; number of working hours Saturday, 9; average number of days idle per member during year, 26; general cause of idleness, slackness of trade; total number of iron molders in locality, 45; cash benefits, sickness $5.00 per week, death $100; President, John Thompson, 91 Cambridge street, Ottawa; Corresponding Secretary, Geo. Kirkpatrick, 73 Flora street, Ottawa; nights of meeting, second and fourth Wednesday of every month.

Name of Organization.—Journeymen Tailors' International Union, No. 143; date organized, 1893; membership, male 44, female 5; number of working hours first five days, 10 to 12; number of working hours Saturday, 10; total number of tailors in locality, male 100, female about 400; difference in wages between organized and unorganized workers, about 50 per cent.; cash benefits, $40 to $100; President, A. Larson, 82 Earnscliffe avenue, Ottawa; Corresponding Secretary, E. Empey, 265 Clarence street, Ottawa; nights of meeting, first and third Mondays of every month.

Name of Organization.—Brotherhood of Railroad Trainmen; date organized, September 9th, 1887; membership, 84; cash benefits, death, three classes of insurance, $400, $800 and $1,200; President, H. M. Sproule, 244 Concession street, Ottawa; Corresponding Secretary, William A. Perry, 580 McLaren street, Ottawa; nights of meeting, first and third Sunday.

Name of Organization.—Bakers' and Confectioners' International Union, No. 101; date organized, October 4th, 1900; membership, 94; average earnings per week, $12.00; number of working hours first five days, "we are trying to do the work in 60 hours per week, or ten hours per day; total number of bakers, etc., in locality, about 150; difference in wages and hours of labor between organized and unorganized bakers, from $3.00 to $4.50 per week, and from two to three hours per day, since the union has been established; there is no special work carried on as yet for members, as nearly all work at night; President, C. Mair, 315 Nepean street, Ottawa; Corresponding Secretary, H. E. Sutton, Cummings Bridge, Ottawa; nights of meeting, first and third Saturday.

Name of Organization.—Journeymen Stone Cutters' International Association; date organized, March 10th, 1893; membership, 75; average earnings per week, $18.00; number of working hours first five days, 9; number of working hours Saturday, 5; average number of days idle per member during year, 180; general cause of idleness, lack of work; total number of stone cutters in locality, 100; difference in wages and hours of labor between union and non-union workers, union men receive $1.00 more per day

than the unorganized workers, and the latter work 60 hours per week, while union members work 50; cash benefits, death $100; Corresponding Secretary, Arthur Kirk, 30 Second avenue, Ottawa; nights of meeting, second and fourth Wednesday of every month.

Name of Organization.—Bricklayers' and Masons' International, No. 7, of Ontario.—date organized, 1889; membership, 102; average earnings per week, $10.00; number of working hours first five days, 9; number of working hours Saturday, 5; average number of days idle per member during year, between four and five months; general cause of idleness, winter, wet weather, etc.; total number of bricklayers, etc., in locality, from 120 to 130; difference in hours of labor between union and non-union workers, non-union men work 10 hours per day and 9 on Saturday; cash benefits are only paid when there is an authorized strike in progress, married men $7.00 per week, unmarried men $5.00 per week; President, H. McCullough, Queen street, Ottawa; Corresponding Secretary, K. E. McGuine, 310 Gloucester street, Ottawa; nights of meting, every Thursday night.

Name of Organization.—Amalgamated Sheet Metal Workers' International Union, No. 11; date organized, May 13th, 1898; membership, 50; average earnings per weeek, $10.50; number of working hours first five days, 9; number of working hours Saturday, 9; average number of days idle per member during year, 30; general cause of idleness, dullness of trade and cold weather; total number of sheet metal workers in locality, 60; difference in wages and hours of labor between union and non-union men, one hour per day and about 15 per cent. in wages, in favor of union men; trade instruction is carried on by the union for the benefit of the members; President, A. J. Kelly, 216 Nepean street, Ottawa; Corresponding Secretary, F. A. Wood, 118 Emmett street, Ottawa; night of meeting, first and third Thursday of every month.

Name of Organization.—Brotherhood of Railroad Trainmen, Lodge 185; date organized, April 7, 1895; membership, 110; average earnings per week, $12.00; cash benefits, death $400, $800, $1,200; Master, T. W. Kennedy, Ottawa; Corresponding Secretary, W. Kevil, Ottawa; nights of meeting, alternate Sunday afternoons.

Name of Organization.—Amalgamated Wood Workers' International Union, No. 116; date organized, 1900; average earnings per week, $10.50; number of working hours first five days, 10; number of working hours Saturday, 9; average number of days idle per member during year, 60; general cause of idleness, winter season; total number of wood workers in locality, 350; cash benefits, death $75, total disbaility $250; President, M. Kelly, 372 Maria street, Ottawa; Corresponding Secretary, W. J. Gregory, 106 McKay street, Ottawa; nights of meeting, first and third Tuesday of every monh.

Name of Union.—Lodge No. 280, International Association of Machinists; date organized, December, 1899; total membership, 60; average earnings per week, $12.00; number of working hours, first five days 10, Saturday 9; total number employed at this calling in this locality, 90; benefits, death $60; there is no difference in wages between union and non-union men in this calling in the locality. President, C. J. Pink, 97 Preston street, Ottawa; Secretary, Alex. Anderson, 231 Gloucester street, Ottawa; nights of meeting, first and third Tuesdays in each month.

Owen Sound.

Name of Organization.—Bricklayers' and Masons' International Union; date organized, May 10th, 1899; membership, 35; average earnings per week, $16.20; number of working hours first five days, 9; number of working hours Saturday, 9; total number of bricklayers, etc., in locality, 40; difference in wages and hours of labor between union and non-union workers, union workers get 30c per hour for a nine-hour day, while non-union workers get only 25c for a ten-hour day; President, James Holland, Owen Sound; Corresponding Secretary, William French, Box 821, Owen Sound; nights of meeting, every Thursday night.

PALMERSTON.

Name of Organization.—Brotherhood of Locomotive Engineers, Div. No. 518; date organized, November 26, 1893; membership, 15; total number of engineers in locality, 25; cash benefits, from $750 to $4,500; nights of meeting, second and fourth Sundays at 1.30 p.m.

PETERBOROUGH.

Name of Organization.—Iron Molders' International Union, No. 191; date organized, 1874; membership, 50; average earnings per week, $12.00 to $15.00 per week; number of working hours first five days, 10; number of working hours Saturday, 5 for four months and 9 for eight months; total number of iron molders in locality, 50; no man is allowed to work here as a molder if not a member of the union; cash benefits, sickness $5.00 per week; death, $100 to $150; President, P. C. Heslep, Peterborough. Corresponding Secretary, W. E. Green, Box 730, Peterborough; nights of meeting, first and third Fridays of every month.

Name of Organization.—Pattern Makers' Union; date organized, October 17th, 1900, average earnings per week, $13.50; number of working hours first five days, 10 hours, 10 minutes; number of working hours Saturday, 5 hours 10 minutes; total number of pattern makers in locality, 21; cash benefits $5.00 per week, death $50; President, Thomas G. Anderson, P. O. Box 255, Peterborough; Corresponding Secretary, J. Y. Gerard, P. O. Box 255, Peterborough; nights of meeting, second Wednesday of every month.

PRESTON.

Name of Organization.—Amalgamated Wood Workers' International Union; date organized, 1900; membership, 48; average earnings per week, $7.50; number of working hours first five days, 10; number of working hours Saturday, 9 in winter, 5 in summer; average number of days idle per member during year, 20; total number of wood workers in locality, 200; cash benefits, death $75, total disability $250; President, Thomas Smith, Preston; Corresponding Secretary, George Wieberg, Preston; nights of meeting, second and fourth Wednesday of every month.

Name of Organization.—Iron Molders' International Union, No. 314; date organized, May, 1900; membership, 45; average earnings per week, $14.00 to $18.00; number of working hours first five days, 10; number of working hours Saturday, 10; average number of days idle per member during year, 50 to 60; general cause of idleness, stock-taking and repairing; total number of molders in locality about 60, with apprentices; cash benefits, sickness $5.00 per week, death $100; President, Albert Whitmen, Preston; Corresponding Secretary; Joseph Jansen, Preston; nights of meeting, first and third Wednesday of every month.

ST. CATHARINES.

Name of Organization.—Allied Metal Mechanics' Union; date organized, March 21st, 1901; membership, 22; average earnings per week, $9.60; number of working hours first five days, 10; number of working hours Saturday, 9; average number of days idle per member during year, 175; total number employed in our business in our locality, 60.

Name of Organization.—Cigar Makers' International Union, No. 140; date organized, August 14, 1881; membership, male 24, female 2; average earnings per week, male $10, female $10; number of working hours first five days, 8; number of working hours Saturday, 6; average number of days idle per member during year, 21; general cause of idleness, stock-taking; total number of cigar makers in locality, 25; difference in wages between union and non-union workers, $4.00 per week; cash benefits, lack of employment $3.00 per week, sickness $5.00 per week, death $50 to $500; President, H. Flumerfelt, Box 153 St Catharines; Corresponding Secretary, Joseph Locke, Box 153, St. Catharines; nights of meeting, first and third Mondays of every month.

Name of Organization.—International Association of Machinists, No. 268; date organized, April 6, 1900; membership, 15; average earnings per week, $12.00; number of working hours first five days, 10; number of working hours Saturday, 5 and 8½; total number of machinists in locality, 22; cash benefits, death $1,500; President, A. E. Grass, Niagara street, St. Catharines; Corresponding Secretary, J. B. Beoll, 19 Centre street, St. Catharines; nights of meeting, first and third Tuesday of every month.

Name of Organization.—United Brotherhood of Carpenters and Joiners; date organized, February, 1883; membership, 33; average earnings per week, $8.00; number of working hours first five days, 9; number of working hours Saturday, 9; average number of days idle per member during year, about 100; general cause of idleness, bad weather and lack of work; total number of carpenters in locality, about 125; difference in wages and hours of labor between union and non-union workers, non-unionists work 10 hours per day, but for the same rate of wages; cash benefits, death, $200; President, George Nicholson, Box 174, St. Catharines; Corresponding Secretary, James Carty, Box 193, St. Catharines; nights of meeting ,every Friday.

Name of Organization.—Journeymen Barbers' International Union; date organized, October 1, 1886; membership, 19; average earninga per week, $9.00; number of working hours first five days, 12; number of working hours Saturday, 18; total number of journeymen barbers in locality, 19; cash benefits, sickness $3 per week, death $25; President, William Band, St. Catharines; Corresponding Secretary, Adam Haynes, St. Catharines; nights of meeting, first and second Monday of every month.

Name of Organization.—United Brotherhood of Plumbers, Steam and Gas Fitters; date organized, April 13th, 1901; membership, 15; average earnings per week, $12.00; number of working hours first five days, 9; number of working hours Saturday, 9; total number of plumbers, etc., in locality, 20; President, David Lawrence, Box 447, St. Catharines; Corresponding Secretary, Patrick O'Gorman, 9 Catharine street, St. Catharines; nights of meeting, every Thursday.

Name of Organization.—Bricklayers' and Masons' International Union, No. 4, of Ontario; date organized, June 6, 1882; membership, 30; average earnings per week, $10.50; number of working hours first five days, 9; number of working hours Saturday, 9; average number of days idle per member during year, 125; general cause of idleness, bad weather and no work. "Do you carry on any special work for members, such as reading room, etc?" "Yes, we have a reading room open during the winter months;" President, E. Bennett, St. Catharines; Corresponding Secretary, C. G. Patey, Box 53, St. Catharines; nights of meeting, first and third Tuesday of every month.

Name of Organization.—Laborers' Protective Union, No. 9,030, A. F. of L.; date organized, April 24, 1901; membership, 48; average earnings per week, $8.25; number of working hours first five days, 9; number of working hours Saturday, 9; average number of days idle per member during year, 100; general cause of idleness, slack times and bad weather; total number of laborers in locality, 200 to 300; difference in wages and hours of labor between union and non-union workers, union men work nine hours per day, non-union 10, union scale of wages $1.35 to $1.50 per day, non-union $1.25 per day; cash benefits, none as yet, but it is intended to establish benefits later on; President, Andrew Dobbin, Beech street, St. Catharines; Corresponding Secretary, Frank Clark, North street, St. Catharines; nights of meeting, first and second Thursday of every month.

St David's.

Name of Organization.—Quarreymen's and Laborers' Union; date organized, July, 1901; membership, 50; average earnings per week, $10.00; number of working hours first five days, 10; number of working hours Saturday, 10; average number of days idle per member during year, 50; general cause of idleness, cold weather and rain; total number of laborers, etc., in locality, 100; President, Frederick Griffiths, St. David's Corresponding Secretary, Wm. Wickens, Box 78, St. David's; nights of meeting, every second week, commencing on July 14th.

ST. THOMAS

Name of Organization.—Brotherhood of Railroad Trainmen; date organized, 1883; total membership, ———; average earnings per week, $13.00; number of working hours first five days, about 10; number of working hours Saturday, same; average number of days idle per member during year, 30; general cause of idleness, crews being laid off on account of slackness of business; total number employed in our business in this locality, about 300; cash benefits, sickness $5.00 per week, death from $400 to $1,200, in case of total disability members receive full amount of policy; President, Y.G. Courtenay, Box 838, St. Thomas; Corresponding Secretary, A. E. Hookway, Box 519, St. Thomas; nights of meeting, first and third Sundays and second and fourth Mondays.

Name of Organization.—Brotherhood of Locomotive Firemen, No. 5; date organized, May 10, 1882; membership, 165; average earnings per week, $12.00; total number employed at your calling in your locality, about 300; cash benefits, insurance, which may be $500, $1,000 or $1,500; President, W. H. O'Brien, 33 Barnes street, St. Thomas; Corresponding Secretary, Andrew Stewart, 39 Barnes street, St. Thomas; nights of meeting, every Tuesday, at 2 p.m.

Name of Organization.—Div. No. 132, Brotherhood of Locomotive Engineers; date organized, 1876; membership, 130; average earnings per week, $25.00; number of working hours first five days, 8 to 12; number of working hours Saturday, same; total number employed in your calling in locality, 250; Michigan Central 150, Wabash and Grand Trunk 100; cash benefits, death $750 to $4,000, in cases of total disability the member receives the amount of insurance he carried; President, James Cain, Box 884, St. Thomas; Corresponding Secretary, Eli Coules, Box 1,313, St. Thomas; nights of meeting, every Monday afternoon at 2.30.

Name of Organization.—Journeymen Barbers' International Union; date organized, May 19th, 1900; membership, 19; average earnings per week, $9.00; number of working hours first five days, 10; number of working hours Saturday, 14; total number of journeymen barbers in locality, 25; difference in wages and hours of labor between union and non-union members, union shops close at 8 o'clock, non-union whenever they please; all the shops employing help are union shops, the others being those that are run by the proprietor alone; cash benefits, sickness $5.00 per week, death $60.00; President, Joseph T. Whitney, 11 Fifth avenue, St. Thomas; Corresponding Secretary, James W. Lodge, 352 Talbot street, St. Thomas; nights of meeting, first and third Monday.

Name of Organization.—Bricklayers' and Stone Masons' International Union, No. 8, of Ontario; date organized, February, 1900; membership, 27; average earnings per week, $12.00; number of working hours first five days, 9; number of working hours Saturday, 9; average number of days idle per member during year, 130; general cause of idleness, severe and rainy weather; total number of bricklayers, etc., in locality, 27; difference in wages and hours of labor between union and non-union workers, 8c per hour; President, James Belbin, St. Thomas; Corresponding Secretary, Charles Scrass, jun., Box 593, St. Thomas; nights of meeting, second and fourth Wednesday of each month.

Name of Organization.—International Brotherhood of Painters, Decorators and Paperhangers; date organized, April, 1900; membership, 40; average earnings per week, $11.00; number of working hours first five days, 10; number of working hours Saturday, 9; average number of days idle per member during year, two to three months; general cause of idleness, lack of work; total number of painters, etc., in locality, about 50; cash benefits, death, maximum, $150; nights of meeting, second and fourth Tuesdays of every month.

Name of Organization.—Div. No. 13, Order of Railway Conductors; date organized, 1883; membership, 90; average earnings per week, $20.00; total number employed at our calling in this locality, 130; cash benefits, there is an insurance graded on $1,000, $2,000 and $3,000, governed by age and other restrictions; President, Peter Stuart, Conductor, C. P. R.; Corresponding Secretary John Mackenzie, Bailiff, Box 557, St. Thomas; nights of meeting, second and fourth Sundays.

SARNIA.

Name of Organization.—Brotherhood of Locomotive Firemen, No. 221; date organized, 1884; membership, 64; average earnings per week, $12.00; total number of firemen in locality, about 80; cash benefits, sickness $3.00 per week, death $500, $1,000 and $1,500, according to class of insurance; nights of meeting, first and third Tuesdays of every month.

Name of Organization.—Div. 189, Order of Railway Conductors; date organized, April 27th, 1886; membership, 25; average earnings per week, $23.00; total number of conductors in locality, 42; cash benefits, death or disability, insurance of $1,000 to $5,000, if a member of the benefit department; President, R. Fletcher, Sarnia; Corresponding Secretary, H. Bell, Tunnel P. O., Sarnia; nights of meeting, first and third Tuesday of every month at 2 p.m.

Name of Organization.—Brotherhood of Locomotive Engineers; date organized, 1883; membership, 41; average earnings per week, $20.00; number of working hours first five days, all kinds of hours; number of working hours Saturday, ditto; average number of days idle per member during year, from 20 to 30; general cause of idleness, engines going to the shops for repairs; total number of engineers in locality, 50; cash benefits, death $750 to $4,500; President, John McNaughton, Tunnel P.O., Sarnia; Corresponding Secretary, Edward Everett, Sarnia; nights of meeting, second and fourth Tuesdays of every month.

SCHREIBER.

Name of Organization.—Brotherhood of Locomotive Engineers; average earnings per week, $30.00; total number of engineers in locality, 25; cash benefits, $1,200 to $3,000; Corresponding Secretary, J. Messon, Schreiber; nights of meting, first and third Friday in very month.

Name of Organization.—Brotherhood of Railway Trainmen; date organized, February, 1892; membership, 35; average earnings per week, $20.00; number of working hours first five days, 10; number of working hours Saturday, 10; total number of railway trainmen in locality, 50; cash benefits, death, $1,200; superannuation, don't live long enough; Master, A. J. Elliott, Schreiber; Corresponding Secretary, W. F. Currie, Schreiber; nights of meeting, second and fourth Sunday.

Name of Organization.—Brotherhood of Locomotive Engineers, Div. No. 562; date organized, ——; total number of engineers in locality, 19; cash benefits, $750 is the lowest and members can carry any amount of insurance; do you carry on any special work for members? Yes, a little instruction is given at the meetings on care of engines; President, C. E. W. Hedge, Schreiber; Corresponding Secretary, J. Presson, Box 78, Schreiber; nights of meeting, first and third Saturday of every month.

STRATFORD.

Name of Organization.—International Typographical Union, No. 139; date organized, November, 1900; membership, 18; average earnings per week, $8.00; number of working hours first five days, 9; number of working hours Saturday, 9; total number of printers in locality, 23; difference in hours of labor between union and non-union workers, 6 per week; cash benefits, death, $60.00; President, Alex Abram, Stratford; Corresponding Secretary, Michael Morrissey, Stratford; nights of meeting, first and third Saturdays in the month.

Name of Organization.—Amalgamated Wood Workers' International Union, No. 107; date organized, March 1st, 1900; membership, 70; average earnings per week, $8.00; number of working hours first five days, 10; number of working hours Saturday, 10; average number of days idle per member during year, 30; general cause of idleness, public holidays and slack times; total number of wood workers in locality, 200; cash benefits, death, $75.00; total disability, $250; President, E. L. Boothby, Box 415, Stratford;

Corresponding Secretary, Albert Thom, Stratford; nights of meeting, alternate Tuesdays.

Name of Organization.—Amalgamated Society of Engineers; date organized, 1851; membership, 29; average earnings per week, $10.00; number of working hours first five days, 10; number of working hours Saturday, 4; total number of machinists, blacksmiths and pattern makers in locality, 500 or 600; difference in wages or hours of labor between union and non-union workers, there is none because of being a union member, but there is a little advantage in wages among the union workers, because as a rule they are better workmen, only good men being eligible for membership; cash benefits, lack of employment, $3.00 per week; sickness, $2.50 per week; death, $60.00; superannuation, $2.00 per week; if a member's wife dies first he is allowed $25.00 of his funeral benefit, which is deducted at the time of his own death; President, J. W. Skinner, G.T.R. Works, Stratford; Corresponding Secretary, C. McLellan, Box 4, Stratford; nights of meeting, alternate Saturdays.

Name of Organization.—Brotherhood of Railroad Trainmen, Lodge No. 8; date organized, April 27, 1887; membership, 40; average earnings per week, $12.00; number of working hours first five days, 10; number of working hours Saturday, 10; total number of trainmen in locality, 60; cash benefits, sickness, $3.00 per week; death, $400, $800 and $1,200, according to rate of insurance; nights of meeting, first and third Sunday of every month.

Name of Union—Lodge No. 38, Brotherhood of Locomotive Firemen; date organized, January, 1880; total membership, 65; average earnings per week, $11.00; average number of days idle during the year, 25; total number employed in this locality, 80; no difference here between union and non-union men as regards wages; benefits, sickness $3.00 per week, death $500 to $1,500 according to premium, total disability, full amount of insurance; President, John F. Spencer, Box 318, Stratford; Secretary, George Brener, Box 318, Stratford; nights of meeting, second and fourth Sunday in each month.

Smith's Falls.

Name of Organization.—Iron Moulders' International Union, No. 201; date organized, membership, 100; average earnings per week, $11.00; number of working hours first five days, 10; number of working hours Saturday, 9; average number of days idle per member during year, three months, owing to lack of work; total number of moulders in locality, 140, including apprentices; cash benefits, lack of employment, 25c per week out of work stamps; sickness, $5.00 per week; death, $100.00; President, Alex. Ridewood, Smith's Falls; Corresponding Secretary, John R. Nichol, Box 210, Smith's Falls; nights of meeting, first and third Tuesday.

Name of Organization.—Order of Railway Conductors, Div. No. 199; date organized, September 23, 1896; membership, 38; average earnings per week, $22.00; total number of conductors in locality, 55; cash benefits, death, $1,000, $2,000, $3.000 and $4,000; nights of meeting, first and third Sunday of every month.

Toronto.

Name of Organization.—Pattern Makers' League of Toronto; date organized, June 1892; membership, 40; average earnings per week, $15.13; number of working hours first five days, 10; number of working hours Saturday, 5; total number of pattern makers in locality, 46; difference in wages between union and non-union workers, 25c per day; cash benefits, sickness, $4.00 per week; death, $50.00; superannuation, $12.00 per month for a member of 25 years' standing, and $16.00 for one of 30 years' standing; total insurance, $50.00; strike benefit, $7.00 per week; President, Charles W. Sherwood, 281 Dovercourt road, Toronto; Corresponding Secretary, Horace J. Maughan, 284 Euclid avenue, Toronto; nights of meeting, first and third Tuesday of every month.

Name of Organization.—Div. No. 344, Order of Railway Conductors; date organized, March 13, 1893; membership, 22; average earnings per week, paid 2 1-2c per mile, running as required; no regular time for work, night, day or Sunday; general av-

erage of time about 2,500 miles per month; cash benefits, death or disability, from $1,000 to $3,000 at option of members, assessment system; President, Richard Benson, Coleman P. O.; Corresponding Secretary, Edwin Seller, 126 Peter street, Toronto; nights of meeting, second and fourth Monday of every month.

Name of Organization.—International Association of Machinists, Lodge No. 371; membership, 50; average earnings per week, $11.00; number of working hours first five days, 10; number of working hours Saturday, 5; total number of machinists in locality, about 60; difference in wages between union and non-union men, 25c per day; cash benefits, death, $50.00; President, W. W. Webster, Toronto Junction P. O.; Corresponding Secretary, John Minshall, 78 Robert street, Toronto; nights of meeting, first and third Monday of every month.

Name of Organization.—Amalgamated Wood Workers' International Union, No. 121; date organized, May 1st, 1900; membership, 60; average earnings per week, $12.00; number of working hours first five days, 10; number of working hours Saturday, 5; total number of wood workers in locality, 209; cash benefits, death, $75.00; President, F. J. Breen, Toronto Junction P. O.; Corresponding Secretary, John Linton, Box 199, Toronto Junction; nights of meeting, first and third Wednesday of every month.

Name of Organization.—Brotherhood of Locomotive Firemen, No. 262; date organized, March 29, 1885; membership, 90; cash benefits, death, insurance policy for $500.00, $1,000 and $1,500; President, George Mark, 51 Cameron street, Toronto; Corresponding Secretary, William D. Donaldson, 509 Adelaide street, Toronto; nights of meeting, every alternate Sunday.

Name of Organization.—Broom Makers' International Union, No. 53; date organized, January, 1900; membership, 29; average earnings per week, $7.00; number of working hours first five days, 10; number of working hours Saturday, 5 in summer; average number of days idle per member during year, 60 to 90; total number of broom makers in locality, 35 or 40; President, George Swanton, Dovercourt P.O.; Corresponding Secretary, James M. Lang, 113 Church street, Toronto; nights of meeting, first and third Thursday of every month.

Name of Organization.—Amalgamated Wood Workers' International Union, No. 111; Date organized, April 28, 1900; membership, 45; average earnings per week, $11.00; number of working hours first five days, planing mills, 9; novelty shops, 10; number of working hours Saturday, 5; cash benefits, death, $75.00; total disability, $250.00; President, N. J. Bateman, 138 Lisgar street, Toronto; Corresponding Secretary, Thomas Harris, 56 Dundas street, Toronto; nights of meeting, first and third Wednesday of every month.

Name of Organization.—Operative Plasterers' International Association, No. 48; date organized, —; membership, 75 to 80; average earnings per week, $14.46, or 34c per hour; number of working hours first five days, 8; number of working hours Saturday, 4; average number of days idle per member during year, from 1 to 3 months; general cause of idleness, winter weather, also depression in the building trade; total number of plasterers in locality, 75; cash benefits, death, $100; in case of sickness, a voluntary collection is taken up for the sick member, generally started by the union; President, John Wilne, 376 Wilton avenue, Toronto; Corresponding Secretary, William J. Hamilton, 42 Foxley street, Toronto; nights of meeting, first and third Wednesday of every month.

Name of Organization.—Plasterers' Laborers' Association; date organized, 1881; reorganized, 1896; membership, 60; average earnings per week, $9.00; number of working hours first five days, 8; number of working hours Saturday, 4; total number of plasterers' laborers in locality, about 80; President, Patrick Smith, 86 Power street, Toronto; Corresponding Secretary, Patrick Cox, 32 Regent street, Toronto; nights of meeting, every alternate Tuesday.

Name of Organization.—International Brotherhood of Blacksmiths; date organized, November 23rd, 1900; membership, 25; average earnings per week, $11.75; number of working hours first five days, 10; number of working hours Saturday, 5; total number of blacksmiths in locality, about 120; President, John Francis, 19 Caer Howell

street, Toronto; Corresponding Secretary, J. J. Bliss, 141 Portland street, Toronto, nights of meeting, first and third Fridays of every month.

Name of Organization.—Div. No. 17, Order of Railway Conductors; date organized, 1881; membership, 75; cash benefits, we have an insurance for death or disability, but no cash benefits for members out of employment; Chief Conductor, Alfred Johns, 21 Mercer street, Toronto; Corresponding Secretary, Charles Mitchell, 23 Rosa avenue, Toronto; nights of meeting, first and third Sunday of every month.

Name of Organization.—Upholsterers' International Union, No. 30; date organized, 1894; membership, 30; average earnings per week, $12.00; number of working hours first five days, 9; number of working hours Saturday, 5; average number of days idle per member during year, four weeks; general cause of idleness, slack season in July and January; total number of upholsterers in locality, 48; difference in wages and hours of labor between union and non-union men, 2 1-2c per hour; cash benefits, in case of sickness the union does any work that can be procured for or by them, such as renovating old furniture, mattresses, etc.; President, Alexander Baird, 58 Sullivan street, Toronto; Corresponding Secretary, Kenneth J. Mundy, 115 Claremont street, Toronto; nights of meeting, second and fourth Monday of every month.

Name of Organization.—Stone Masons' International Union; date organized, 1881; membership, 65; average earnings per week, $10.00; number of working hours first five days, 8; number of working hours Saturday, 4; average number of days idle per member during year, 50 to 70; general cause of idleness, wet weather and snow and frost in the winter; total number of stone masons in locality, 65; President, Charles Ingram, 58 Pumbert street, Toronto; Corresponding Secretary, John R. Cross, 34 Folis avenue, Toronto; nights of meeting, every Thursday.

Name of Organization.—Bricklayers' International Union, No. 2 of Ontario; date organized, — ; membership, 300; average earnings per week, $14.00; number of working hours first five days, 8; number of working hours Saturday, 4; cash benefits, death, $150.00; President, William Steen ,367 Carlton street, Toronto; Corresponding Secretary, Thomas Izzard, 23 Virtue street, Toronto; nights of meeting, every Tuesday.

Name of Organization.—United Brotherhood of Carpenters and Joiners; date organized, 1882; membership, 113; average earnings per week, $9.00; number of working hours first five days, 9; number of working hours Saturday, 5; average number of days idle per member during year, 90; general cause of idleness, no work; total number of carpenters etc., in locality, 1,200; difference in wages between union and non-union men, 10 per cent.; cash benefits, death, $200; President, W. J. Hird, 42 Reid street, Toronto; Corresponding Secretary, John Tweed, 250 Palmerston avenue, Toronto; nights of meeting, second and fourth Wednesday of every month.

Name of Organization.—Bread Salesmen's Union; date organized, May, 1899; membership, 55; average earnings per week, $9.00; number of working hours first five days, 8; number of working hours Saturday, 11; President, W. Edis, 196 Teraulay street, Toronto; Corresponding Secretary, B. C. Webber, 587 Parliament street, Toronto; nights of meeting, second and fourth Tuesday of every month.

Name of Organization.—Boiler Makers' and Iron Ship Builders' International Union; date organized, May 6th, 1893; membership, 55; average earnings per week, $12.00; number of working hours first five days, 10; number of working hours Saturday, 5 during the summer months; average number of days idle per member during year, 25; total number of boiler makers, etc., in locality, 60; difference in wages between organized and unorganized workers, from 2c to 11c per hour; President, Harry M Pollard, 130 Northcote avenue, Toronto; Corresponding Secretary, John H. Marshall, 86 Gladstone avenue, Toronto; nights of meeting, second and fourth Friday of every month.

Name of Organization.—Amalgamated Sheet Metal Workers' International Union, No. 30; date organized, November 23rd, 1896; membership, 103; average earnings per week, $12.50; number of working hours first five days, 9; number of working hours Saturday, 5; average number of days idle per member during year, about 15; general

cause of idleness, slack season; total number of sheet metal workers in locality, about 200; difference in wages and hours of labor between union and non-union workers, members receive from 4c to 5c per hour more than non-members and work about 1 hour per day less; do you carry on any special work for members, such as evening classes, etc.? Yes, we have a school for draughting and pattern cutting; President, Daniel McRae, 166 Argyle street, Toronto; Corresponding Secretary, William Bryant, 58 Euclid avenue, Toronto; nights of meeting, first and third Friday of every month.

Name of Organization.—Cigar Makers' International Union, No. 27; date organized, May, 1869; membership, 157; female, 4; average earnings per week, male, $9.96; female, $9.00 (this represents average for actual working time, 49 weeks); number of working hours first five days, 8; number of working hours Saturday, 4; average number of days idle per member during year, 21; general cause of idleness, waiting for prepared tobacco and wet weather; total number of cigar makers in locality, male, 157; female, 4; cash benefits, lack of employment, $3.00 per week; sickness, $5.00 per week; death, from $50.00 to $550, from two to fifteen years' membership; President, P. Farley, Duchess street, Toronto; Corresponding Secretary, R. Haberstock, 196 Elizabeth street, Toronto; nights of meeting, regular meeting third Monday of the month, the Executive board meets every other Monday evening.

Name of Organization.—Brotherhood of Painters, Decorators and Paperhangers; date organized, March, 1887; membership, 218; average earnings per week, $8.50; number of working hours first five days, 9; number of working hours Saturday, 5; average number of days idle per member during year, 70; general cause of idleness, dullness of trade; total number of painters, etc., in locality, 500; difference in wages between union and non-union members, about 2 1-2c per hour; cash benefits, death, from $50 to $150; President, Robert Collins, 3 John street, Toronto; Corresponding Secretary, Frank McCoy, 82 Ulster street, Toronto; nights of meeting, second and fourth Tuesdays of every month.

Name of Organization.—International Brotherhood of Bookbinders, Local Union, No. 28; date organized, 1893; membership, 166; average earnings per week, $12.50; number of working hours first five days, 9 1-2; number of working hours Saturday, 4 1-2; average number of days idle per member during year, 2 weeks; general cause of idleness, lack of work; total number of bookbinders in locality, 200; cash benefits, lack of employment, remittance of dues; President, John L. Marshall, 163 Farley avenue, Toronto; Corresponding Secretary, Charles Goldsmith, 111 Harrison street, Toronto; nights of meeting, second and fourth Monday, Executive first and third Monday.

Name of Organization, Metal Polishers', Buffers', Platers, Brass Moulders' and Brass Workers' International Union, No. 53.—Date organized, June, 1900; membership, 55; average earnings per week, $9.00; number of working hours first five days, 10; number of working hours Saturday, 5; average number of days idle per member during year, 6; cause of idleness, slackness of trade; total number of metal polishers, etc., in locality, 100; cash benefits, lack of employment, none unless for strikers, death, $100; President, Frederick Burton, 36 Lippincott street, Toronto; Corresponding Secretary, Alexander Croker, 267 Euclid avenue, Toronto; nights of meeting, second and fourth Tuesday of every month.

Name of Organization.—Printing Pressmen's International Union; date organized, 1882; membership, 79; average earnings per week, $14.00; number of working hours first five days, 9 hours and 50 minutes; number of working hours Saturday, 4 hours and 50 minutes; total number of pressmen in locality, 79; President, George Crighton, 111 Carlaw avenue, Toronto; Corresponding Secretary, William Davey, 51 Bellevue place, Toronto; nights of meeting, first Monday of every month.

Name of Organization.—Toronto Mailers' International Union, No. 5; date organized, November 11, 1893; membership, 27; average earnings per week, $14.00; number of working hours first five days, day men work 48 hours per week or 8 hours per day for 6 days; night and day work combined, 44 hours per week; total number of mailers in locality, 27; cash benefits, death, $60.00; President, John J. O'Reilly, 166 McCaul

street, Toronto; Corresponding Secretary, Thomas Morton, 5 St. Matthias' place, Toronto; nights of meeting, first Monday of every month.

Name of Organization.—Amalgamated Wood Workers' International Union, No. 34; date organized, 1895; membership, 130; average earnings per week, $12.00; number of working hours first five days, 10; number of working hours Saturday, 5; cash benefits, there are none from the treasury, but we see that no brother lacks comforts if sick; do you carry on any special work for members? We are about to start a reading room; President, William Ward, 202 Brunswick avenue, Toronto; Corresponding Secretary, James Dempster, 55 Carr street, Toronto; nights of meeting, first and third Tuesday of every month.

Name of Organization.—Metal Polishers', Buffers' and Platers' International Union, No. 21; date organized, July, 1893; membership, 66; average earnings per week, $10.00; number of working hours first five days, 10; number of working hours Saturday, 5; average number of days idle per member during year, 56; general cause of idleness, slack season; difference in wages between union and non-union workers, 25 per cent.; cash benefits, death, $175.00; do you carry on any special work for members? Yes, we have a reading room and club room; President, C. E. Beltz, 86 Woolsley street, Toronto; Corresponding Secretary, E. C. Salmon, 116 Markham street, Toronto; nights of meeting, second and fourth Wednesday of every month.

Name of Organization.—Theatrical Stage Employees' Union; date organized, October 4, 1894; membership, 45; average earnings per week, about 25 cents per hour (average $17.00 per week); number of working hours first five days, 11; number of working hours Saturday, about 13; total number of days idle per member during year, about three months, when the theatres are closed for the summer; total number employed at our calling in locality, 45; cash benefits, $25.00; President, William Powis, 98 Hayter street, Toronto; Corresponding Secretary, W. E. Meredith, 472 Dovercourt road, Toronto; nights of meeting, second Sunday of every month.

Name of Organization.—Varnishers' and Polishers' International Union, No. 65; date organized, February 1st, 1893; membership, 102; average earnings per week, $12.00; number of working hours first five days, 10; number of working hours Saturday, 5; average number of days idle per member during year, 31; general cause of idleness, slackness of trade; total number employed at our calling in locality, 125; cash benefits, death, $75.00; disability, $25.00; President, William Welsh, West Toronto Junction P O.; Corresponding Secretary, Joseph Harding, 112 Birch avenue, Toronto; nights of meeting, second and fourth Tuesdays of every month.

Name of Organization.—Architectural and Structural Iron Workers' International Union, No. 23; date organized, May 14th, 1900; membership, 75; number of working hours first five days, 9; number of working hours Saturday, 5; total number employed at our calling in locality, about 75; difference in wages between union and non-union members, union men receive a minimum wage of 22 1-2c per hour and 25c for first-class men; non-union members receive from 14 cents per hour and upwards; cash benefits, death, $75.00; President, William Kemp, 54 Farley avenue, Toronto; Corresponding Secretary, George Oulton, 16 Belshaw avenue, Toronto; nights of meeting, first and third Tuesdays in every month.

Name of Organization.—International Typographical Union, No. 91; date organized, 1844; membership, 658; female, 5; number of working hours first five days, 9 hours and 50 minutes; number of working hours Saturday, 4 hours and 50 minutes; cash benefits, death, $40. sickness, $3.00 per week for 13 weeks; President, William Powell, P.O. Box 543; Corresponding Secretary, Joseph Clinton, Box 543, Toronto; nights of meeting, first Saturday of every month.

Name of Organization.—International Association of Machinists, Lodge 235; date organized, February, 1891; membership, 397; average earnings per week, $12.37; number of working hours first five days, 10; number of working hours Saturday, 5; average number of days idle per member during year, 27; general cause of idleness, ten weeks' strike; total number of machinists in locality, 500; difference in wages between union and non-union members, non-members average about 25c per day less; cash

benefits, death, $50.00 to $200.00; President, Henry Boucher, West Toronto Junction P. O.; Corresponding Secretary, Arthur C. Quinn, 20 Waterloo avenue, Toronto; nights of meeting, first and third Tuesday of every month.

Name of Organization.—Excelsior Assembly, No. 2,305, Knights of Labor; President, John Francis, 19 Caer Howell street, Toronto; Corresponding Secretary, William Gilmour, 7 Walton street, Toronto.

Name of Organization, Brotherhood of Locomotive Firemen, No. 67—Date organized, March 14th, 1887; membership, 120; cash benefits, sickness, $3.00 per week; death, three classes of insurance, $500, $1,000 and $1,500, members can belong to any of the three classes; nights of meeting, first and third Sunday of every month.

Name of Organization.—Journeymen Stone Cutters' International Association; date organized, 1840; membership, 58; average earnings per week, $18.92; average number of days idle per member during year, about 120; general cause of idleness, no building during the winter months; total number of stone cutters in locality, 58; differences in wages between union and non-union members, 10c to 15c per hour; cash benefits, sickness, subscription list: death, $100 if in good standing; President, James Craig, Box 573, Toronto; Corresponding Secretary, Frank Dawson, Box 573, Toronto; nights of meeting, second and fourth Friday of every month.

Name of Organization.—Amalgamated Society of Engineers; date organized, 1850; membership, ——; average earnings per week, $13.50; number of working hours first five days, 10; number of working hours Saturday, 5; average number of days idle per member during year, 10; general cause of idleness, dullness of trade; cash benefits, lack of employment, $2.50 per week; sickness, $2.50 per week; death, $60.00; superannuation, $1.75 to $2.50 per week as per length of membership; contingent benefit, $1.25; accident benefit, $500.00, and benevolent grants to members in straightened circumstances; President, James Moore, 132 Euclid avenue, Toronto; Corresponding Secretary, John M. Clements, 39 Bellevue avenue, Toronto; nights of meeting, alternate Mondays.

Name of Organization.—Brotherhood of Railroad Trainmen, Lodge No. 322; date organized, —— membership, 70; average earnings per week, $12.50; cash benefits, death, $400 to $1,200; President, W. J. Cook, Rolyat street, Toronto; Corresponding Secretary, H. T. Meredith, 125 Givens street, Toronto; nights of meeting, first and third Sunday of every month.

Name of Organization.—Maple Leaf Assembly, No, 1,960, Knights of Labor (Railroad Teamsters): date organized, April 15, 1899; membership, 170; average earnings per week, $8.80; number of working hours first five days, 10 to 12; number of working hours Saturday, 8 to 10; total number of railroad teamsters in locality, 220: President, J. G. Macdonald, 75 Mitchell avenue, Toronto; Corresponding Secretary, William Jones, 177 Bolton avenue, Toronto: nights of meeting, first and third Saturday of every month.

Name of Organization.—Journeymen Tailors' International Union, No. 132: date organized, 1883: membership, 130: female. 35: average earnings per week, male, $9.00; female, $5.00; total number of custom tailors in locality, male, 400; female, 500; difference in wages between union and non-union members, male, 50 per cent.; female, 15 per cent.; cash benefits, death, $100.00: President, J. H. Addison, 114 May street, Toronto; Corresponding Secretary, George Sangster, 43 Scott street, Toronto; nights of meeting, second Monday of every month.

Windsor.

Name of Organization.—Bricklayers' and Masons' International Union, No. 6, of Ontario; date organized, April 21, 1895: membership, 29; average earnings per week, it would be difficult to give an average weekly earnings of our members, our wages are 36 1-2c per hour, or $3.25 per day, but I do not think that any of our members average in work more than 200 days per year, and some not as much as that; number of working hours first five days, 9; number of working hours Saturday, 9; average number of days idle per member during year, 120; general cause of idleness, inclemency

of the weather and scarcity of work; total number of bricklayers, etc., in locality, 29; cash benefits, death, $50.00; President, Edward Ainsworth, Windsor; Corresponding Secretary, Matthew Rapson, Box 615, Windsor; nights of meeting, every Tuesday.

Name of Organization.—Plumbers' and Tinners' International Union, No. 8,019, A. F. of L.; membership, 21; average earnings per week, $14.25; number of working hours first five days, 9; number of working hours Saturday, 9; average number of days idle per member during year, 60; general cause of idleness, cold weather, which stops building and digging; total number employed at our calling in our locality, 12 tinners, 11 plumbers; President, David Smith, 101 Windatt street, Windsor; Corresponding Secretary, William T. Parker, 24 McKay avenue, Windsor; nights of meeting, first and third Wednesday of every month.

Name of Organization.—Brotherhood of Locomotive Engineers, No. 390; date organized, June 12, 1893; membership, 18; average earnings per week, $19.00; total number of engineers in locality, about 35; cash benefits, death, none, unless insured in organization, which is a separate feature; Chief Engineer, Caleb Knight, Windsor; Corresponding Secretary, David Lanspeary, Box 353, Windsor; nights of meeting, every alternate Tuesday.

Name of Organization.—Brotherhood of Locomotive Firemen, Lodge No. 421; date organized, June 6, 1890; membership, 30; average earnings per week, $17.25; total number of firemen in locality, 40; cash benefits, death, $500, $1,000 and $1,500; do you carry on any special work for members ? Yes, a little instruction is given on meeting nights on the use of air brakes, etc.; nights of meeting, every second Tuesday.

Woodstock.

Name of Organization.—Iron Moulders' International Union, No. 249; date organized, February, 1899; membership, 18; average earnings per week, $13.00; number of working hours first five days, 10; number of working hours Saturday, 9; average number of days idle per member during year, 2 and one-half months; general cause of idleness, shops closed; total number of iron moulders in locality, 25; cash benefits, sickness, $5.00 per week; death, $100.00; President, Joseph Robinson, Woodstock; Corresponding Secretary, William McLaughlin, Box 30, Woodstock; nights of meeting, first and third Tuesday of every month.

Report of Central Labor Organizations.

Name of Organization.	Date organized.	No. of organizations represented.	President.	Address.	Secretary.	Address.	Night of meeting.
Berlin—							
Trades and Labor Council	1901	19	Alex. A. Rose	Berlin	J. H. Kressler	Box 224	1st and 3rd Monday.
Brantford—							
Trades and Labor Council	1897	18	Thos. Bremmer	West Mill St	Frank Mather	75 Greenwich St	1st and 3rd Wednesday.
Guelph—							
Trades and Labor Council	1898	8	Jos. Dandeno	Guelph	Wm. Drever	Guelph	2nd and 4th Friday
Hamilton—							
Trades and Labor Council	1888	30	Samuel Landers	Grant Ave	Henry Obermeyer	96 Catherine St	1st and 3rd Friday.
Kingston—							
Trades and Labor Council	1899	22	W. A. Tweed	79 Arch St	James O'Reilly	William St	1st and 3rd Thursday.
Ottawa—							
Allied Trades and Labor Association	1898	20	V. H. Annable	374 Gloucester St	P. M. Draper	93 Slater St	2nd and 4th Friday.
Stratford—							
Trades and Labor Council	1900	9	Wm. Stovel	Stratford	Walter Crossland	Box 5	2nd and 4th Friday.
St. Catharines—							
Trades and Labor Council	1897	10	Geo. F. Nicholson	Box 714	James Carty	Box 193	1st and 3rd Wednesday.
Toronto—							
Trades and Labor Council	1881	47	Samuel Moore	52 Teraulay St	D. W. Kennedy	59 Edward St	2nd and 4th Thursday.
Amalgamated Woodworkers' Council	1900	5	S. Moore	52 Teraulay St	A. J. Bateman	138 Lisgar St	2nd and 4th Monday.
Federated Council of Building Trades	1886	10	F. J. Wilson	91 Palmerston Ave.	Patrick Cox	52 Regent St	2nd and 4th Monday.
Allied Printing Trades Council	1895	8	M. J. Carmody	198 Baldwin St	Wm. Irwin	38 Niagara St	1st and 3rd Tuesday.
Federated Council of Metal Trades	1901	10	John Francis	19 Caer-Howell St	Horace J. Maughan	284 Euclid Ave.	2nd and 4th Monday.

Trade or calling.	Date organized.	Membership.	Name of President.	President's Address.	Name of Secretary.	Secretary's Address.	Nights of Meeting.
Allandale—							
Bro. Locomotive Engineers	1892	30	Daniel Cameron	Allandale, Ont.	Geo. S. Lawrence	Box 24	1st and 3rd Tuesday.
Belleville—							
Sheet Metal Workers	1901	19	Moses Doyle	Grove st	Mr. McCarthy	Murney st	1st and 3rd Friday.
Bro. Locomotive Firemen	1884	67	Chas. Orrill	Station P.O.	Harry Wilson	Station P. O.	2nd and 4th Tuesday.
Berlin—							
Woodwookers No. 129	1900	72	Geo. Febrenbach	P. O. Berlin	Michael Kahle	P. O. Berlin	2nd and 4th Wednesday.
Painters and Decorators	1901	14	Julius Rietz	Cameron st	Geo. H. Stable	Box 392	2nd and 4th Tuesday...
Broommakers No. 7	1900	9	E. Kuhn	Berlin P.O	A. G. Volge	Box 507	2nd and 4th Monday.
Woodworkers No. 112	1900	220	Franklin Schatz	Berlin	C. Krubner	Berlin	2nd and 4th Wednesday.
Woodcarvers	1899	42	David Heit	Berlin	E. J. O'Brien	Berlin	1st and 3rd Tuesday.
Bricklayers, Masons and Plasterers	1900	48	A. May	Berlin	Jacob E. Cook	11 Church st	Every Thursday.
Retail Clerks	1901	46	Adam Seppel	Care A. Weslot & Co.	Albert K Levan	54 Queen st S	1st and Last Friday.
General Teamsters	1901	22	Julius Luft	Berlin	B K. Weber	Berlin	2nd Thursday.
Cigar makers	1899	51	F. G. Caroll	Berlin	Henry Englert	Box 224	2nd Tuesday.
Typographical Union	1900	17	Chas. Delion	Berlin	Anthony Beith	Box 70	1st and last Friday.
Tanners and Curriers	1900	60	Frank Ackerrecht	Berlin	Herman Shallhan	Berlin	2nd and 4th Wednesday.
Brantford—							
Cigar makers	1886	21	A. Crandars	Mohawk st	Frank Mather	75 Grenwick st	3rd Tuesday.
Sheet Metal Workers	1900	15	P. A. Cheevers	25 Gilkinson st			4th Tuesday.
Plasterers	1900	9	Jos Wood	Eagle Place	John A. Whelan	151 Randon st	2nd Tuesday.
Plumbers, Steam and Gas Fitters.	1899	10	J. Anguish	30 North Bruce st	F. Helm	186 Sheriden st	2nd and 4th Wednesday.
Machinists		45	Wm. Dickson	40 King st	G. F. Towers	221 Darling st	2nd and 4th Wednesday
Bricklayers and Masons	1898	46	W. J. Kerr	97 Wellington st	Ed. Fisher	83 Victoria st	Every Thursday
Federal Labor Union	1898	75	W. F. Lyle	P. O. Brantford	Frank Donovan	31 Colborne st	2nd and 4th Friday.
Brockville—							
Bro. of Railroad Trainmen	1886	48	J. H. Kelly	Brockville	Chas. Kerr	Brockville	1st and 3rd Sunday.
Federal Labor Union	1900	20	W. H. Boon	Brockville	E. A Clement	Box 81	1st and 3rd Wednesday.
Typographical Union	1900	14	L. E. Murphy	Brockville	S. W. Bell	Box 100	1st Monday.
Chapleau—							
Bro. Locomotive Engineers	1887	21	Ernest M. Cryer	Chapleau	J. D. McAdam	Chapleau	1st and 3rd Monday.
Collingwood—							
Bro. Carpenters and Joiners	1900	20	W.J. Reid	Collingwood	J V. Buffy	Collingwood	2nd and 4th Thursday.
Federal Labor Union	1901	20	N. F. Highley	Collingwood	Albert Houghton	Collingwood	2nd and 4th Wednesday
Dundas—							
Machinists	1900	40	J. W. Dickson	Box 98	Wm. McGregor, jr	Box 203	1st and 3rd Saturday.
Woodworkers	1900		Wm. Ball	Dundas	Samuel Patterson	Dundas	Alternate Fridays.
Fort William—							
Bro. Locomotive Engineers	1884	16	Wm. Blennerhasset	Fort William	John Whithurst	Box 157	Every Tuesday.
Machinists	1900	12	James Booker	McDonald st	H. C. Carvell	Cumberl'd st/t. Arthur	1st and 3rd Friday.
Galt—							
Machinists	1899	50	Thos. Barnhard	Galt	S.[McLean	Galt	2nd Monday.

Guelph—							
Typographical Union	1900	26	A. A. Anderson	Guelph	O. R Wallace	Care The Mercury	1st Thursday.
Iron Molders	..	66	Arthur McCullough	Guelph	C. W. Dawson	Box 208	2nd and 4th Tuesday.
Woodworkers	1900	127	W. H. Readwin	Guelph	J. Dandeno	Guelph	1st and 3rd Tuesday.
Bakers and Confectioners	1901		Clarence Liddel	Guelph	Andrew McGrath	Box 81	2nd Saturday.
Bricklayers and Masons	1900	180	Jos. Shaw	Guelph	Henry Thatcher	Guelph	2od and 4th Thursday.
Carriage and Wagon Makers	1901	20	J. H. Parker	109 Neeve st	Alfred L. Eisel	Guelph	2nd and 4th Monday.
Wine Clerks Union	1901	16	J. W. Williams	Commercial Hotel	D. Black	Western Hotel	1st Sunday.
Journeymen Barbers	1901	12	August Mogk	Wellington Hotel	W. H. Fairlay	Macdonald st	2nd Tuesday.
Brussel Carpet Weavers	1900	10	John Branford	Care City Hotel	Ernest Lea	Care Western Hotel	Alternate Fridays.
Journeymen Tailors	1900	69	James Thomas	Guelph	Thos. H. Gordon	Box 294	1st and 3rd Monday.
Hamilton—							
Leather Workers on Horse goods	1900	19	Wm. Berry	Hamilton	Norman Creen	109 Main st. E.	2nd and 4th Tuesday.
Amal Soc. Carpenters and Joiners	1860	28	R. Somerville	485 Cannon st	Wm. Disher	80 Catharine st. N	Alternate Fridays.
Painters and Decorators	1900	53	James Smith	Queen st. N	W. A. Turk	519 James st. N.	1st and 3rd Monday.
Cigar makers	1865	209	A LaFrance	56 Chatham st	Thos O'Dowd	P. O. Box 35	2od Wednesday
Boot and Shoe Day Workers	1900	42	E. W. A. O'Dell	189 Cannon st., Hamilt'n	Arthur B. Snider	83 Jackson st.	1st Thursday.
Boot and Shoe Fitters	1900	87	Miss A. McDonald	232 Luke st	Miss A. Gibson	149 Hess st.	4th Thursday.
Machinists	1900	75	Wm. Kerns	Hamilton	R. T. Land	173 Oak ave	Alternate Fridays.
Barte ders Union	1899	51	M. Meston	New American Hotel	A. Spellersay	103 King st. E	1st and 3rd Sunday.
Garment Workers	1898	23	Christian Kruss	64 Catharine st. S	Cyrus P. Olliver	145 Grange ave	4th Wednesday.
Street Railway Employees	1899		John W. Ogilvie	17 Oak ave	Albert Webber	6 Sanford ave	1st and 3rd Saturday.
Bricklayers and Masons	1881	120	Jno. Seaman	28 West ave. N	Wm. J. Whitelock	39 West ave. N.	Every Thursday.
Plumbers, Steam and Gas Fitters.	1899	40	Frank Drake	106 Gibson ave	A. W. Harris	28 Smith ave	1st and 3rd Wednesday.
Teamsters	1899	96	J. H. Larkin	612 Barton st	J. H. R. Taylor	41 King st	2nd and 4th Thursday.
Journeymen Horseshoers	..	18	B. H. Lewis	28 Market st	C. E. Groves	40 York st	2nd and 4th Wednesday
Bakers and Confectioners	1900	35	Wm. McLure	Hamilton	Ernest Kelly	310 Robert st.	Every Saturday.
Tobacco Workers	1899	162	W. Wheaton	190 Hess st. N	D. McLean	7 Richmond st	2nd and 4th Monday.
United Bro Carpenters & Joiners.	1882	50	E. Hancock	389 McNab st N	Wm. Brass	176 Market st	1st and 3rd Thursday.
Journeymen Tailors	1892	75	Jno. Lord	80 Gore st	Hugh Robinson	42 James st. N	1st Monday.
Iron Molders	1862	310	Thos. H. Church	Cor. Pearl and Peter st.	Wm. Hugo	287 Mary st	Every Wednesday.
Sheet Metal Workers	1899	40	John Henderson	Burton st. E	W. H. Dennis	270 East ave, N	2od and 4th Friday.
Woodworkers No. 37	1900	26	H. H. Harper	298 Jackson st. W	Charles Middleton	81 Gore st	1st and 3rd Tuesday.
Metal Polishers, Buffers & Platers.		13	Henry Murdoch	218 Barton st. E	J. Shower	372 Cannon st	1st and 3rd Wednesday
Bro. of Locomotive Firemen	1893						1st and 3rd Sunday.
Federal Labor Union (City Fire Department)	1900	38	R. Wilson	224 Canada st	Robert Aitchison	52 George st	1st Monday.
Journeymen Barbers	1900	55	Harry Halford	59 South John st	James L. Stickel	131 West Stuart st	1st and 3rd Monday.
Typographical Union	1869	80	Geo. H. Richmond		John J. Burns	280 John st. N.	2nd Saturday.
Broom-makers	1900	14	E Norton	60 Wentworth st	F. Vallie	30 Wood st. W.	2nd Monday.
Kingston—							
Builders' Laborers	1899	80	John Burns	65 Queen st	John Donovan	97 Bagot st	1st and 3rd Wednesday.
Plumbers, Steam and Gas Fitters.	1900	25	J. J. Bruce	Kingston station	John Conley	143 Pine st.	1st and 3rd Tuesday.
Iron Moulders	1899	20	Charles Rutherford	Brock st	Wm. Varney	27 King st	1st and 3rd Monday.
Bricklayers, Masons and Plasterers	1900	57	William Chigston	394 Brock st	Joseph Wilson	Rideau and Bay st	2nd and 4th Tuesday.
Journeymen Tailors	1901	45	William James	203 University ave	Wm. Bucknell	402 Montreal st	Every Monday.
Painters and Decorators	1900	34	W. J. Savage	18 vine st	Frank Gorgett	12 Redan st	1st and 3rd Monday.
Laborer's Protective Union	1900	67	J. O. Saunders	159 Nelson st	W. S. Shufflebottom	466 Montreal st	1st and 3rd Saturday.
Sheet Metal Workers	1900	19	Wm. Patterson	Cor. King and Centre st	Charles Harris	370 Bagot st	2nd and 4th Friday.
Street Railway employees	1900	29	Peter Ryan	Ellis st	W. A. McCann	27 John st	1st and 3rd Sunday.
Amalgamated Soc. Engineers	1850	11	Richard Bunt	Cor. North and Bagot st.	John Lovick	152 University ave	Every Wednesday.

Trade or calling.	Date organized.	Membership.	Name of president.	President's address.	Name of secretary.	Secretary's address.	Night's of meeting.
Kingston.—*Continued.*							
Typographical Union	1886	25	Ed. Ball	364 Barrie st	Samuel Carson	220 University ave	Last Thursday.
Ironworkers and Helpers	1900	185	John Flanigan	Cor. William & Barrie st	Albert J. Meredith	52 Division st	2nd and 4th Wednesday
Bro. of Carpenters and Joiners	1899	68	Nat Smith	Collingwood st	H. Sallsbury	Barriefield, Ont	2nd and 4th Monday.
Lindsay—							
Bro. Railroad Trainmen	1889	65	Wm. Hammill	Lindsay	H. M Lockwood	Lindsay	2nd and 4th Sunday.
Bro. Locomotive Firemen	....	30	W. Chambers	Lindsay	W. Dolby	Lindsay	Alternate Sundays.
London—							
Painters and Decorators	1895	.....	W. F. Graham	528 South street	J. W. McCandless	121 Albert st	2nd and 4th Thursday.
Electrical Workers	1900	60	James O. Rushton	332 York st	Thomas Sproat	83 George st	1st and 3rd Friday.
Amal. Soc. Carpenters and Joiners	1860	30	J. W. Ward	Albion st W	John Lanton	379 Waterloo st	Alternate Wednesdays.
Cigarmakers	1899	157	James Walsh	155 Albert st	Charles J. Meadow	186 Kent st	1st and 3rd Thursday.
Bricklayers and Masons	1863	58	J. Clark	400 Clarence st	H. Rymill	491 Oxford st	Alternate Tuesdays.
Broom-makers	1900	25	Wm. Rae	11 Oxford	Charles Eggett	721 Princess ave	1st and 3rd Tuesday.
Bro. Locomotive Firemen	1872	48					1st Tues and 3rd Sunday
Order of Railway Conductors	....	41					1st and 3rd Sunday.
Midland—							
Longshoremeu International Union	1900	130	Wm. Clegg	Midland	D. A. Hall	Midland	2nd and 4th Monday.
North Bay—							
Bro. Railroad Trainmen	1887	80	John Russell	North Bay	D. Denau	North Bay	2nd and 4th Thursday.
Machinists	1900	13	F. Ronaldson	North Bay	Thomas Hinds	North Bay	1st and 3rd Monday.
Order of Railroad Conductors	1889	19	S. N. Berry	North Bay	H. A. Washburn	North Bay	1st and 3rd Monday.
Bro. Locomotive Engineers	...	33	Oscar Barnhart	North Bay	James Devine	North Bay	1st and 3rd Monday.
Ottawa—							
Bro. Carpenters and Joners	1900	50	Wm. G. Adamson	156 Friel st	I. E. Cross	486 Gladstone ave	1st and 3rd Monday.
Letter Carriers	1901	24	M F Fagan	Hintonburg, Ont.	M. A. Demers	47 St. Andrew st	1st Tuesday.
Plumbers, Steam and Gas Fitters.	1888	59	M. O'Connell	204 Somerset st	Joseph Huthoise	289 St. Andrew st	2nd and 4th Monday.
Builders' Laborers	1889	50	J. Burroughs	442 St. Patrick st	Thomas Rosborough	426 Maria st	2nd and 4th Thursday.
Bookbinders	1900	.....	F. W. Stewart	care J. Hope & Sons	A. F. Cotto	257 Bolton st	3rd Friday.
Commercial Union (Clerks)	1891	100	Napoleon Mercier	264 Water st	Adolphe Le Clerc	277 Clarence st	2nd and 4th Monday.
Printing Pressmeu	1879	23	W. P. Webb	197 Slater st	Alf. K. Larden	327 Bell st	2nd Monday.
Typographical Union	1867	301	A. E. Sanderson	06 Gloucester st	J. A. Murphy	412 McLeod st	1st Saturday.
Bro. Locomotive Engineers	1895	59					2nd and 4th Sunday.
Iron Molders	1891	35	John Thompson	91 Cambridge st	Geo. Kirkpatrick	73 Flora st	2nd and 4th Wednesday.
Journeymen Tailors	1893	49	A. Larson	82 Earnscliffe ave	E. Empey	265 Clarence st	1st and 3rd Monday.
Bakers and Confectioners	1900	94	C. Mair	315 Nepean st	H. E. Sutton	Cumming's Bridge	1st and 3rd Saturday.
Stonecutters	1893	75			A. Kirkpatrick	30 Second ave	2nd and 4th Wednesday.
Bricklayers and Masons	1889	102	H. McCullough	Queen st	K. E. MaGuire	310 Gloucester st	Every Thursday.
Sheet Metal Workers	1898	50	A. J. Kelly	216 Nepean st	F. A. Wood	118 Emmet st	1st and 3rd Thursday.
Bro. Railroad Trainmen	1895	110	T. W. Kennedy	Ottawa	W. Kevil	Ottawa	Alternate Sundays.
Woodworkers	1900		M. Kelly	372 Maria st	W. J. Gregory	106 McKay st	1st and 3rd Tuesday.
Machinists	1899	60	C. J. Pink	97 Preston st	Alex. Anderson	231 Gloucester st	1st and 3rd Tuesday.

Owen Sound—							
Bricklayers and Masons	1899	35	James Holland	Owen Sound	Wm. French	Box 821	Every Thursday.
Palmerston—							
Bro. Locomotive Engineers	1893	15					2nd and 4th Sunday.
Peterborough—							
Iron Molders	1874	50	P C. Heslep	Peterborough	W. E. Green	Peterborough	1st and 3rd Friday.
Patternmakers	1900		Thomas G. Anderson.	P. O. Box 255	J Y. Gerard	P. O. Box 255	2nd Wednesday.
Preston—							
Woodworkers	1900	48	Thomas Smith	Preston	Geo. Weiberg	Preston	2nd and 4th Wedeesday
Iron Molders	1900	45	Albert Whitman	Preston	Joseph Jansen	Preston	1st and 3rd Wednesday.
St. Catharines—							
Allied Metal Mechanics	1901	22					
Cigarmakers	1881	26	N. Flumerfelt	Box 153	Jos. Locke	Box 153	1st and 3rd Monday.
Machinists	1900	15	A. E. Grass	Niagara st.	J. E. Beoll	19 Centre st.	1st and 3rd Tuesday.
Bro. Carpenters and Joiners	1883	33	Geo. Nicholson	Box 714	James Carty	Box 193	Every Friday.
Journeymen Barbers	1886	19	Wm. Band	St. Catharines	Adam Haynes	St. Catharines	1st and 2nd Monday.
Plumbers, Steam and Gas Fitters	1901	15	David Lawrence	Box 447	Patrick O'Gorman	9 Catharine st.	Every Thursday.
Bricklayers and Masons	1882	30	E. Bennett	St. Catharines	C. G. Patey	Box 53	1st and 3rd Tuesday
Laborers' Protective Union	1901	48	Andrew Dobbin	Beech st	Frank Clark	— North st.	1st and 2nd Thursday.
St. David's—							
Quarrymen and Laborers' Union	1901	50	Frederick Griffiths	St. David's	Wm. Wickens	Box 78	Every second week.
St. Thomas—							
Bro. Railroad Trainmen	1883		T. G. Courtenay	Box 838	A. F. Hookway	Box 519	1st and 3rd Sunday and 2nd and 4th Monday.
Bro. Locomotive Firemen	1882	165	W. H. O'Brien	33 Barnes st.	Andrew Stewart	39 Barnes st.	Every Tuesday.
Bro. Locomotive Engineers	1876	130	James Cain	Box 884	Eli Coules	Box 1313	Every Monday.
Journeymen Barbers	1900	19	Jos. T. Whitney	11 Fifth ave.	James W. Lodge	352 Talbot st.	1st and 3rd Monday.
Bricklayers and Masons	1900	27	James Bilton	St Thomas	Chas. Scrass, Jr.	Box 593	2nd and 4th Wednesday
Painters and Decorators	1900	40					2nd and 4th Tuesday.
Order of Railway Conductors	1883	90	Peter Stuart	Conductor C.P R.	John Mackenzie	Bailiff, Box 557	2nd and 4th Sunday.
Sarnia—							
Bro. Locomotive Firemen	1884	64					
Order Railway Conductors	1886	25	R. Fletcher	Sarnia	H. Bell	Tunnel P.O.	1st and 3rd Tuesday.
Bro. Locomotive Engineers	1883	41	John McNaughton	Tunnel P.O.	Ed. Everett	Sarnia	2nd and 4th Tuesday.
Schreiber—							
Bro. Railroad Trainmen	1892	35	A. J. Elliott	Schreiber	W. F. Currie	Schreiber	2nd and 4th Sunday.
Bro. Locomotive Engineers			C. E. W. Hedge	Schreiber	J. Presson	Box 78	1st and 3rd Saturday.
Stratford—							
Typographical Union	1900	18	Alex. Abram	Stratford	— Morrissey	Stratford	1st and 3rd Saturday.
Woodworkers	1900	70	E L Boothby	Box 415	Albert Thom	Stratford	Alternate Tuesdays.
Amal. Soc. Engineers	1857	29	J. W. Skinner	G.T.R. Works	C. McLellan	Box 4	Alternate Saturdays.
Bro Railroad Trainmen	1887	40					1st and 3rd Sunday.
Bro. Locomotive Firemen	1889	65	Jno F. Spencer	Box 318	Geo Brewer	Box 318	2nd and 4th Sunday.
Smith's Falls—							
Iron Molders		100	Alex. Ridewood	Smith's Falls	John R. Nichol	Box 210	1st and 3rd Tuesday.
Order of Railway Conductors	1896	39					1st and 3rd Sunday.
Toronto—							
Pattern Makers	1892	40	Chas. W. Sherwood	281 Dovercourt rd.	Horace J. Manghan	284 Euclid ave.	1st and 3rd Tuesday.
Order of Railway Conductors, No. 334	1893	22	Richard Benson	Coleman P.O.	Edwin Seller	126 Peter st.	2nd and 4th Monday.
Machinists, No. 371		50	W. W. Webster	Toronto Junction P.O.	John Minshall	78 Robert st.	1st and 3rd Monday.

Trade or calling.	Date organized.	Membership.	Name of president.	President's address.	Name of secretary.	Secretary's address	Nights of meeting.
Toronto.—*Continued.*							
Woodworkers, No. 121	1900	60	F. J. Breen	Toronto Junction P.O.	John Linton	Box 199, Toronto Jct.	1st and 3rd Wednesday.
Broom Makers	1901	29	Geo. Swanton	Dovercourt P.O.	James M. Lang	113 Church st	1st and 3rd Thursday.
Woodworkers, No. 118	1900	45	A. J. Bateman	138 Lisgar st.	Thos. Harris	56 Dundas st.	1st and 3rd Wednesday.
Plasterers	....	80	John Milne	376 Wilton ave.	Wm. J. Hamilton	42 Foxley st	1st and 3rd Wednesday.
Plasterers' Laborers	1881	60	Patrick Smith	86 Power st.	Patrick Cox	32 Regent st	Alternate Tuesdays.
Blacksmiths	1900	25	John Francis	19 Caer-Howell st.	J. J. Bliss	141 Portland st.	1st and 3rd Friday.
Div. No. 17, Order of Railway Con.	1881	75	Alfred Johns	21 Mercer st.	Chas. Mitchell	23 Rose ave.	1st and 3rd Sunday.
Upholsterers	1894	30	Alex. Baird	58 Sullivan st.	Kenneth J. Mundy	115 Claremont st.	2nd and 4th Monday.
Stonemasons	1884	65	Chas. Ingram	58 Humbert st	John R. Cross	34 Follis ave	Every Thursday.
Bricklayers	....	300	Wm. Steen	367 Carleton st.	Thos. Issard	23 Virtue st	Every Tuesday.
Bro. Carpenters and Joiners	1882	113	W. J. Hird.	42 Reid st.	John Tweed	250 Palmerston ave.	2nd and 4th Wednesday.
Bread Salesmen	1899	55	W. Edis	196 Terauley st.	B. C. Webber	587 Parliament st.	2nd and 4th Tuesday.
Boiler Makers & Iron Shipbuilders.	1893	55	Harry M. Pollard	130 Northcote ave	John H Marshall	86 Gladstone ave.	2nd and 4th Friday.
Sheet Metal Workers	1896	103	Daniel McKae	166 Argyle st.	Wm Bryant	58 Euclid ave.	1st and 3rd Friday.
Cigar makers	1869	161	P. Farley	Duchess st.	R Haberstock	196 Elizabeth st	3rd Monday
Painters and Decorators	1887	218	Robert Collins	3 John st.	Frank McCoy	92 Ulster st.	2nd and 4th Tuesday.
Bookbinders	1895	166	John L. Marshall.	163 Farley ave	Chas. Goldsmith	111 Harrison st.	2nd and 4th Monday.
Metal Polishers, Buffers, Platers and Brass Molders, No. 530	1900	55	Fred Burton	36 Lippincott st.	Alex. Croker	267 Euclid ave.	2nd and 4th Tuesday.
Printing Pressmen	1882	79	Geo Crighton	111 Carlaw ave.	Wm. Davey	51 Bellevue place	1st Monday.
Mailers	1893	27	John J. O'Reilly	166 McCaul st.	Thos. Morton	5 St Matthia's place.	1st Monday.
Woodworkers, No. 34	1895	130	Wm. Ward	202 Brunswick ave.	James Dempster	55 Carr st.	1st and 3rd Tuesday.
Metal Polishers, No. 21	1893	66	C. E. Beltz	86 Woolsley st.	E. C Salmon	116 Markham st.	2nd and 4th Wednesday.
Theatrical Stage Employees	1894	45	Wm. Powis	98 Hayter st	W. E. Meredith	472 Dovercourt rd.	2nd Sunday.
Varnishers and Polishers	1893	102	Wm. Welsh	Toronto Junction P.O.	Jos. Harding	112 Birch ave.	2nd and 4th Tuesday.
Architectural and Structural Iron Workers	1900	75	Wm. Kemp	54 Farley ave.	Geo. Oulton	16 Belshaw ave.	1st and 3rd Tuesday.
Typographical Union	1844	658	Wm. Powell	P.O. Box 543	Jos. Clinton	P.O. Box 543	1st Saturday.
Machinists, No. 235	1891	397	Henry Boucher	W. Toronto Junct. P.O.	Arthur C. Quinn	20 Waterloo ave	1st and 3rd Tuesday.
Excelsior Ass., No. 2305, K. of L.	1882	....	John Francis	19 Caer-Howell st.	Wm. Gilmour	7 Walton st.	Last Friday.
Bro. Locomotive Firemen, No. 67	1887	120	....	....	....	....	1st and 3rd Sunday.
Stonecutters	1840	58	James Craig	Box 573	Frank Dawson	Box 573	2nd and 4th Friday.
Amal. Soc. Engineers	1850	....	James Moore	132 Euclid ave.	John M. Clements	39 Bellevue ave	Alternate Mondays.
Bro. Railroad Trainmen, No. 322	....	70	W. J. Cook	Roylat st.	H. T. Meredith	125 Givens st.	1st and 3rd Sunday.
Journeymen Tailors	1883	165	J. H. Addison	114 May st.	Geo. Sangster	43 Scott st.	2nd Monday.
Windsor—							
Bricklayers and Masons	1895	29	Edward Ainsworth	Windsor	Matthew Rapson	Box 615	Every Tuesday.
Fed. Labor Union, No. 8019	....	21	David Smith	101 Windat st	Wm. T. Parker	24 McKay ave	1st and 3rd Wednesday.
Bro. Locomotive Engineers	1893	18	Caleb Knight	Windsor	David Lanspeury	Box 353	Alternate Tuesday.
Bro. Locomotive Firemen	1890	30	....	....	....	....	2nd Tuesday.
Woodstock—							
Iron Molders	1899	18	Jos. Robinson	Woodstock	Wm. McLaughlan	Box 30	1st and 3rd Tuesday.

REMARKS FROM LABOR ORGANIZATIONS.

3, Garment Worker—We believe that the adoption of the union label on all clothing would tend to benefit, not only the trade, but the public generally, as it would prevent the making of clothing in undesirable and pestilential places, and would, if anything, keep up or enhance the income of the wage-earner, thus creating a better distribution for the greater number.

6. Laborer—Union masons and bricklayers are working nine hours per day in this locality; the contractors employ union and non-union men at the same rate of wages and for the same number of hours.

7, Bricklayer—That work be done by day labor; that no Government contract be let, but building inspectors appointed to see tthat the work is done properly; $500 is about the average we earn per year.

10, Machine Wood Worker—We think that every mill should put in dust fans on all machines, as it would greatly benefit the health of the employees.

12, Locomotive Engineer—If the hours of duty, especially during the winter months, could be regulated, so that we would not be on duty over 12 hours, it would be of permanent benefit to us.

15, Machinist—A law enforcing the eight-hour day; Government ownership of all public works.

21, Longshoreman—No legislation is required for the longshoremen, we are too well organized here, but in the other trades a more stringent alien labor law is required; since organization we have a better observance of Sunday, as the union men refused to work at the elevators on that day.

22, Street Railway Employee—Do away with Sunday cars, whereby our men could enjoy a Sunday as other working men do and allow us to live up to the laws of the Bible, which says :—"Six days shalt thou labor and do thy work—rememember the Sabbath day to keep it holy."

26, Plasterers' Laborer—We have this year got an increase in the rate of our wages from 24c to 25c per hour (an increase of one cent per hour), and an agreement with the employers for two years from June 1st, 1901, to June 1st, 1903, this we have not had for a number of years until this year. There are no remarks concerning our branch of the trade that we could bring to you at present.

29, Stonecutter—The way in which our craft could be most improved would be by the introduction of a shorter work day, as for our work, nine hours per day is too much, and the eight-hour system would improve it a great deal; also by putting a stop to sub-contracts and piecework.

33, Plumber—We would repeat our suggestion of last year, wherein we stated that Provincial by-laws governing plumbing should be enacted, and that each municipality should be forced to appoint a practical plumber as inspector, so that the by-laws would be properly enforced. We maintain that no one but a practical plumber is competent to inspect our work. We are severely handicapped owing to the loose methods of tinstalling, plumbing, etc. We have made repeated appeals to our City Council to have this condition remedied, but without avail. By complying with the above suggestions not only would our craft be benefited, but the health of the community would be safeguarded.

34, Blacksmith—We would like to see a law passed making it compulsory for all employers to place smoke stacks or chimneys over all fires, and to provide proper ventilation, so as to carry off all gases, smoke and heat, as far as possible.

40, Upholsterer—Abolition of piece work; compulsory half holiday per week; owing to so much dust, our business is very unhealthy; Government recognition of the union label.

44, Carpet Weaver—It is the opinion of this organization that the tariff on Brussels carpets made and shipped from England should be the same as from any other country, so that the two firms manufacturing them in Canada would be able to compete with the English manufacturers, as they claim they cannot do so under the present conditions.

46, Baker—We would like a law put in force making it compulsory for us to do our work in the day time, like other trades.

50, Machinist—We are not aware of anything special to bring before you, but shall always be happy to give all the information in our power.

51, Railway Conductor—I find it rather difficult to make my answers fit in with the questions on enclosed form, so I send you a short history of the year's work. There are 42 conductors running freight in our district; we had a very busy year; we are paid by the mile, 2 1-2c per mile on our run; passenger conductors in this district get $103 per month, but work every day in the year; freight crews get about $75.00 per month, and work six days a week. Quite a number of the conductors are members of the brakemen's order. They join it first, and some of them do not care to leave it. There are about ten in this district who are not members of any railway organization. We made from 3,800 to 4,200 miles a month last year, which would make the average about $93,00 per month for the year. We have no regular hours of work. The call boy calls us any hour of the day or night, Sundays the same, but we are allowed eight hours' rest after sixteen hours on duty.

53, Woodworker—There are no fire escapes on factories here, the machines are not protected in any way, and the sanitary conditions are very bad.

55, Bricklayer—I am glad to be able to report that trade is better now than it has been for the past eight years.

56, Printer—I may say in connection with our union that we have only lately got recognition in this city, and our scale of wages, etc., are not by any means what our organization wishes for; but we think that by getting recognition we have put in the thin edge of the wedge, and expect a better condiion of things to accrue therefrom.

57, Bricklayer—To prevent strikes we are of the opinion that the Mayor should be an arbitrator in case of dispute, to decide what he thinks is just, and the bosses and employees to submit to his decision; but the Mayor would have to be a man who would not be biassed.

62, Sheet Metal Worker—We have given you the number of journeymen, but there are quite a number working here who are not, as there is a tinware and lantern factory here which employs a number of press hands and boys who are not tinsmiths.

63, Carpenter—The adoption of a universal eight-hour working day, legalized by act of Parliament, would be the best thing for the improvement of our craft, in our opinion.

It has been suggested that during the winter evenings talks on the trade, methods, materials, tools and other matters connected with our craft be carried on. If by any means the Government would supply or lend the lodges the latest works on the subjects named above, for, say, three months it is thought that the condition of the men would improve by natural evolution. and the country would be benefited thereby. A sort of travelling library might be established, at very little cost to the country, the union being held responsible for the books, models, drawings and the matter lent them, and also paying express charges. If this system were adopted and supplemented with visits occasionally of persons who were able to explain any difficult problem in such works, the benefit would be doubled. These persons might lecture the union on improved methods, and in connection with the trade. This would be in line with the movement now active regarding technical schools, and technical teaching. The lecturer need not confine himself to one trade, but to all matters connected with the building and kindred trades.

A movement ia on foot here to make a day's work 9 hours, instead of 10, and to this end a petition is being circulated and is already largely signed, to induce the Town Council to make nine hours a day's work for all corporation employees who are working by the day. Several firms here have given their employees the Saturday half holiday; this is a start.

66, Locomotive Fireman—We would appreciate legislation forbidding traffic on Sunday, other than passenger and perishable freight.

69, Iron Molder—Yes, eight hours per day.

73, Machinist—As I have already stated, the Canadian Pacific Railway here give their employees a bonus hour; when they are working full time 59 hours is a week's work, and they are paid for 60 hours. Some of us here are employed by the Canadian Northern Railway, and have to work the full 60 hours for 60 hours' pay. It is a matter you might consider, and if possible have the C. N. R. grant its employees the same privileges as the C.P.R. We are led to believe that this is an Ontario law; we are also strongly in favor of, and, in fact, urge an apprentice system of four years, and also a sum sufficient to support an apprentice when first starting at the business, so as to give an intelligent poor boy the same chance as one better off; and, further, we strongly urge the fortnightly pay system, as it is now in the west. Here we are nearly a month behind all the time, being paid for May's work, for instance, on the 23rd and 24th, and sometimes as late as the 27th of the next month. Hoping you will give these remarks your careful consideration, etc.

74, Tanner—Our union is strongly opposed among tanners, but the result has to be in our favor.

76, Boilermaker and Shipbuilder—The apprentice system is very bad in Ontario; in our line they take men at any age from 16 to 35 in non-union shops, and send them out to do the work that requires a practical boilermaker; the small towns, where living is so much cheaper, are our worst enemies: we think Government ownership the best remedy.

81, Tailor—More vigilance on the part of the factory inspectors in enforcing the proper sanitary conditions, and regarding the employment of child labor.

84, Locomotive Engineer—Government inspection of locomotive boilers; making it a criminal offence to employ minors as telegraph operators, and also engineers without two years' experience as locomotive firemen, or conductors without two years' experience as brakemen; making it compulsory for all stations and yards to be provided with distant semaphore signals, and all engines to be equipped with air brakes.

87, Custom Tailor—In answer to request for remarks, would say that as our label is the life and backbone of our organization, we most certainly would welcome such legislation as would protect us from piratical infringement and illegal use of the same. The Government has given us registration, it now remains to be seen if the law will afford us protection.

91, Cigar Maker—We would recommend that the import duty on cigars be increased to $4.00 per pound, as this would enable the Canadian manufacturer to compete in the ten-cent class of cigars. The Inland Revenue stamp duty of $6.00 per 1,000 cigars should be reduced. It was increased from $3.00 to $6.00 at the time of the Northwest rebellion, and the Government promised to reduce it when the cost of the rebellion was made up.

95, Bookbinder—Compulsory arbitration as per New Zealand act; union label on Government publications; municipal and Government ownership of all the means of production and distribution; the short work day, we heartily approve of not more than 8 hours per day; enforcement of the Alien Labor Law, which has been a dead letter; the establishment of a Government bindery for the Province of Ontario.

97, Bricklayer—We think it would be for the best interest of labor if the Government passed a law making eight hours per day compulsory on all Government works.

99, Metal Polisher—We consider that if our trade was thoroughly organized it would better our condition.

101, Woodworker—More stringent factory inspection and the inauguration of a Government eight-hour day, which, we believe, is the only available way of securing it.

105, Machinist—Shorter working hours.

108, Clerk—We have been trying to get a Saturday half holiday during the months of July and August, but have not been successful so far. We must first amend the early closing by-law through the City Council, and send it to the Legislature for ratification; we are still at it.

116, Printer—A compulsory arbitration law, if properly enacted, would benefit all classes of working men.

117, Woodworker—The Factories Act should be more strictly enforced, and we think it would be well if the said act were amended so as to permit certain officers of unions to enter factories and report to the Factory Inspector.

126, Locomotive Firemen—With regard to grievances and injustice, it would require an officer specially deputed to look after that part of our business.

131, Locomtive Fireman—Firemen employed on this branch of the Grand Trunk Railway do not seem to be alive to their interests by becoming members of the organization which has secured for them the wages they are earning to-day.

134, Journeyman Plumber—We would suggest that there be a general work day of eight hours, as it would give steadier employment for a greater number of men; also, that there be a practical plumber appointed as inspector for each city.

136½, Painter—The Brotherhood of Painters, Decorators and Paperhangers of America was organized March 15th, 1887, in Baltimore, Md., and incorporated December 7th, 1894, revised at Milwaukee December 4, 1899, and affiliated with the American Federation of Labor and the National Building Trades Council; Local Union, No. 205, organized June 26th, 1900, affiliated with the Hamilton Trades and Labor Council August 6th, 1900; No. 205 is the only local so far as known to possess and use a label of their own design in Canada in the painting trade.

128, Brakeman—We would suggest the curtailment to a certain extent of Sunday work; the enforcement of a law making the use of automatic couplers and air brakes compulsory on all cars, both freight and passenger; increased compensation for injuries or death, where a company is responsible, and a law compelling all railroads to carry two brakemen and conductors on all trains, and at least one brakeman and conductor, where engines are running light, that is, without any cars except a way car.

141, Railway Conductor—The only grievance is that the Intercolonial Railway run by the Government, is the only railway now using the old pin and link coupling. This is now more dangerous to the men than before the adoption of the automatic coupler, resulting in loss of fingers and sometimes the whole hand. We would think that, instead of being last, a Government railroad would be the first to adopt safety appliances.

151, Journeyman Plumber—We think a law compelling all cities and towns that have a system of sewers to have a practical plumber for an inspector would be a great benefit both to the health of the public, and also to the trade; also that the hours of labor should be shortened on Saturday to 5, that is a half holiday on Saturday.

157, Patternmaker and Engineer—Our membership are desirous of having a nine-hour day, as a standard of labor, and are of the opinion that such could be established by legislation.

161, Engineer and Patternmaker—We wish some revision of the law on duty, as cast iron patterns for stove plates and agricultural work are imported from the United States, and duty is collected for cast-iron at 3½c per pound; duty should be collected at the rate of at least 35 or 40 cents per pound; some $10,000 o $15,000 worth of these patterns are annually imported from the United States and duty paid for them as above;

in our opinion, the revision should be as follows: collect the duty as at present ad valorem on the value of the article proved by a sworn invoice.

166, Retail Clerk—In regard to above remarks, I might say that before we had agitated early closing all union and non-union men and women here had to work as long as 12 hours the first five days and 16 or 17 hours on Saturday; we now work 10 hours the first five days and 15 Saturday; so you see that through our efforts we have materially aided the non-union men as well as ourselves.

168, Carpenter—During the early part of the present year our union made rapid progress, and when the strike occurred we had a membership of 340. The membership has decreased slightly since owing to removals from the city. We are organizing our evening classes for the winter, and will be pleased to receive information in reference to Mchanics' Institute regulations or pertaining to technical schools.

171, Locomotive Engineer—In reference to average wages it would be rather difficult, owing to the system of running first in first out, also the great fluctuation in traffic, but I might say that since the introduction of the heavy engines, although the pay per day is about 7 per cent. more, the average monthly pay is much smaller than with the larger engines.

172, Cigarmaker—Owing to the unhealthy nature of the trade, special factory regulations should be provided, touching the proper system of ventilation, and the allaying of the dust created by the handling of the raw material.

177, Journeymen Barber—Stricter enforcement of the Sunday labor law; a Provincial board of examiners in the trade, to prevent such impositions on the public as barber colleges, departmental barber shops, and apprentices who have not served three years at the trade.

178, Journeyman Barber—We work from 8 o'clock to 8 o'clock, wtih an hour off to each meal; on Saturday we work from 8 until midnight.

185, Iron Worker—One benefit to labor organization would be a periodical tour in the midst of labor organization by prominent magnates, who, through their general experience, are our only council and guidance; labor legislation is a cardinal principle and will no doubt ere long be recognized as such, through the attention your department is showing to the interest of labor organizations in general, and its system of instruction merits more regard than has formerly been given the Bureau for its good work.

188, Locomotive Fireman—There is one dark cloud hanging over every fire boy on this system of railway, and that is our Providence Society, though wrongfully named such. If it were possible to remove this cloud from the employees' horizon, such a man would have the blessings of afflicted workers; we also regret having alien officials on this road, for want of a workable law to prevent the same.

190, Locomotive Engineer—Would suggest that a board of conciliation and arbitration be appointed by the Government, having the power to investigate and settle matters in dispute between railway companies and employees regarding wages, hours of labor, and also the more glaring cases of unjust treatment of employees.

192, Locomotive Fireman—Less Sunday labor and shorter working hours during the week.

194, Custom Tailor—There is no limit to the hours of labor in the busy season; employees work from 12 to 15 hours a day. The large majority of the employers do not furnish workshops, and the employees have to provide such work rooms, which cost them from $25 to $30 per year; a large number work at their homes; a lasting benefit to our craft would be the securing of free work rooms, and the abolition of the home system.

195, Locomotive Engineer—Is there anything you can do to do away with Sunday labor, and provide means of compulsory arbitration to take the place of strikes; if so you would be conferring a lasting benefit on railroad men.

197, Locomotive Engineer—Government inspection of locomotive boilers.

211, Railway Conductor—We have for years been trying to do away with Sunday labor.

Table shewing average wages per week and hours of labor, with comparison between those organized and unorganized, in localities as reported.

Trade or Calling.	Average wages per week.		Hours of labor first five days.		Hours on Saturday.		Total hours per week.		Average number of weeks idle.
	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.	
	$ c.	$ c.							
Allandale:									
Bro. Locomotive Engineers	....	....	....	....	....	....	....	....	....
Belleville:									
Sheet Metal Workers	7 50	....	10	....	9	....	59	....	....
Bro. Locomotive Firemen	....	....	....	....	....	....	....	....	....
Berlin:									
Woodworkers, No. 112	8 00	....	10	....	9	....	59	....	5
Painters and Decorators	9 00	....	10	....	9	....	65	....	....
Broom-makers	8 50	....	10	....	9 & 5	....	55 & 59	....	....
Woodworkers, No. 129	7 50	....	10	....	9	....	59	....	....
Wood Carvers	10 00	....	10	....	5	....	55	....	....
Tanners and Curriers	7 50	....	10	....	10	....	60	....	....
Bricklayers and Masons and Plasters	10 50	....	9	....	9	....	54	....	16
Retail Clerks	8 00	....	10	....	15	....	65	....	....
General Teamsters	21 00	18 00	10	....	10	....	60	....	16
Cigarmakers	9 00	7 00	8	10	7	10	47	60	4
Typographical Union	7 50	5 50	9	....	6½	....	51½	....	....
Brantford:									
Cigarmakers	8 00	5 00	8	12	5	....	46	53	11
Sheet Metal Workers	10 50	....	10	....	9	....	53	....	11
Plasterers	10 00	9 50	9	10	9	10	54	60	12
Plumbers, Steam and Gasfitters	13 75	....	10	....	5	....	55	....	12
Machinists	....	....	10	....	9 & 5	....	59 & 55	....	....
Bricklayers and Masons	9 00	....	9	10	5	10	50	60	18
A. F. of L. 7370 (Laborers)	8 50	....	9	....	5	....	....	50	4
Brockville:									
Bro. Railroad Trainmen	14 00	....	10	....	10	....	60	....	....
Fed. Labor Union (Laborers)	8 50	....	10	....	9 & 10	....	59 & 60	....	20
Typographical Union	10 00	....	9	....	9	....	54	....	....
Chapleau:									
Bro. Locomotive Engineers	35 00	....	....	....	....	....	....	....	....
Collingwood:									
Bro. Carpenters and Joiners	10 50	9 75	10	....	10	....	60	....	4
Fed. Labor Union (Laborers)	7 50	....	10	....	10	....	60	....	12
Dundas:									
Machinists	10 50	8 75	10½	....	5	....	57½	....	....
Wood-workers	8 25	....	10	....	9	....	59	....	3
Fort William:									
Bro. Locomotive Engineers	....	....	....	....	....	....	....	....	....
Machinists	14 00	....	10	....	5 & 9	....	55 & 59	....	5
Galt:									
Machinists	8 50	....	10	....	5	....	55	....	....
Guelph:									
Typographical Union	9 00	6 00	9	....	8	....	53	....	....
Brussel Carpet Weavers	10 00	....	10	....	5	....	55	....	....
Journeymen Tailors	....	....	....	....	....	....	....	....	....
Iron Molders	....	....	10	....	9	....	59	....	....
Wood-workers	7 50	....	10	....	9	....	59	....	7
Bakers and Confectioners	....	....	....	....	....	....	....	....	....
Bricklayers and Masons	16 50	12 50	9	10	9	10	54	60	16
Carriage and Wagon-makers	9 00	....	10	....	9	....	59	....	....
Wine Clerks	8 00	....	....	....	....	....	....	....	....
Journeymen Barbers	9 00	....	10	....	14	....	64	....	....
Hamilton:									
Leather Workers on horse goods	6 50	....	10	....	10	....	60	....	....
Amal. Soc. Carpenters and Joiners	12 40	....	10	....	5	....	55	....	....
Painters and Decorators	9 00	7 50	9	10	5	10	50	60	3
Cigarmakers	10 00	....	8	....	4	....	44	....	2
Boot and shoe (day workers)	9 00	....	10	....	5	....	55	....	1
Boot and Shoe (Fitters)	3 00	....	10	....	5	....	55	....	7
Machinists	11 00	10 00	10	....	5	....	55	....	7

Table shewing the average wages per week and hours of labor, etc.—*Continued.*

Trade or calling.	Average wages per week.		Hours of labor first five days.		Hours on Saturday.		Total hours per week.		Average number of weeks idle.
	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.	
Hamilton.—*Con.*	$ c	$ c.							
Bartenders	9 00	6 00	8		10		50		
Garment-workers	11 00		10		5		55		
Street Railway Employees	9 00	8 00	10	13	10	13	60	78	
Bricklayers and Masons	8 25		9		5				27
Plumbers, Steam and Gasfitters	12 00	10 50	10 & 8		5 & 8		55 & 48		
Teamsters	12 00		9		9		54		
Journeymen Horseshoers	9 60	6 60	10		9		59		
Bakers and Confectioners	11 00		10		10to12		60 & 62		1
Tobacco-workers	9 00		10&9½		5 & 7½		55		8
Bro. of Carpenters and Joiners	12 40	9 00	10		5		55		15
Journeymen Tailors	10 25	9 00	10		12		62		7
Iron Molders	13 50		10		10		60		12
Sheet Metal Workers	12 00	10 50	10		5		55		5
Wood-workers	9 15		10		5		55		
Metal Polishers' Buffers and Platers	10 00		10		9		59		16
Bro. Locomotive Firemen	12 50		12to15		12to15		72 to 90		
Fed. Labor Union (Fire Dept)	12 00								
Journeymen Barbers	9 00		10		14		64		
Typographical Union			10		4		54		
Broom-makers	12 00	10 75	10		9		59		1
Kingston :									
Fed. Labor Union (Laborers)	9 00		9		9		54		19
Plumbers, Gas and Steam Fitters	12 00		9		9		54		5
Iron Molders	12 10		10		5		55		8
Bricklayers, Masons and Plasterers	12 00	9 00	9	10	9	10	54	60	21
Journeymen Tailors	9 00		10		10		60		
Painters and Decorators	8 00		10		9		59		15
Laborers Protective Union	7 00	5 75	9	10	9	10	54	60	15
Sheet Metal Workers	11 50		9		9		54		5
Street Railway Employees	6 50	5 00	15		15		90		
Amal. Soc. Engineers	12 00	10 75	10		5		55		6
Typographical Union	12 00		10		9		59		
Ironworkers and Helpers	8 25	7 50	10		5 & 9		55 & 59		
Bro. Carpenters and Joiners	12 00	7 50	9		9		54		10
Lindsay :									
Bro. Railroad Trainmen									
Bro. Locomotive Firemen	11 00		16		16		96		
London :									
Painters and Decorators	10 80	9 00	9		8		53		
Amal. Soc. Carpenters and Joiners	10 50		9		7½		52½		
Cigarmakers	7 00	6 00	8	10	6	10	46	60	2
Bricklayers and Masons	11 00	9 50	8		7		47		20
Electrical Workers									
Broom-makers									
Bro. Locomotive Firemen No. 117	11 45								1
Order Railway Conductors No. 16	20 00								
Midland :									
Longshoremen's Int. Union	11 50	7 50							
North Bay :									
Bro. Railroad Trainmen	15 00		8		8		48		16
Machinists	12 60		10		10		60		
Order Railway Conductors	22 00								
Bro. Locomotive Engineers	20 00								
Ottawa :									
Bro. Carpenters and Joiners	15 00		9		9		54		6
Letter Carriers	7 50 to 12 50								
Plumbers, Steam and Gas Fitters	13 50		9		9		54		10
Builders' Laborers	9 50	8 25	9		5	9	50	54	20
Bookbinders	12 00		10		5		55		
Commercial Union (Clerks)	9 00		9		13		58		

Table shewing the average wages per week and hours of labor, etc.—*Continued.*

Trade or Calling.	Average wages per week.		Hours of labor first five days.		Hours on Saturday.		Total hours per week.		Average number of weeks idle.
	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.	
	$ c.	$ c.							
Ottawa.—*Con.*									
Printing Pressmen	14 50		10		4		54		
Typographical Union	13 00		8½		5		48		3
Bro. Locomotive Engineers	21 50								
Iron Molders	13 20		10		9		59		4
Journeymen Tailors									
Bro. Railroad Trainmen									
Bakers and Confectioners	12 00	9 00	10	13	10	13	60	78	
Stone-cutters	18 00	17 00	9	10	5	10	50	60	30
Bricklayers and Masons	10 00		9	10	5	9	50	59	18
Sheet Metal Workers	10 50	9 00	9	10	9	10	54	60	5
Bro. Railroad Trainmen	12 00								
Wood-workers	10 50		10		9			59	10
Machinists	12 00		10		9				
Owen Sound :									
Bricklayers and Masons	16 20	15 00	9	10	9	10	54	60	
Palmerston :									
Bro. Locomotive Engineers									
Peterborough :									
Iron Molders	13 50		10		8 & 5		55 & 58		
Patternmakers	13 50		10		6		56		
Preston :									
Wood-workers	7 50		10		9 & 5		55 & 59		3
Iron Molders	16 00		10		10		60		9
St. Catharines :									
Allied Metal Mechanics	9 60		10		9		59		29
Cigarmakers	10 00	6 00	8		6		46		4
Machinists	12 00		10		5 & 8½		55 & 58½		
Bro. Carpenters and Joiners	8 00		9	10	9	10	54	60	16
Journeymen Barbers	9 00		12		18		78		
Plumbers, Gas and Steam Fitters	12 00		9		9		54		
Bricklayers and Masons	10 50		9		9		54		20
Laborers' Protective Union	8 25	7 25	9	10	9	10	54	60	16
St. Davids :									
Quarrymen and Laborers' Union	10 00		10		10		60		8
St. Thomas :									
Bro. Railroad Trainmen	13 00		10		10		60		5
Bro. Locomotive Firemen No. 5	12 00								
Bro. Locomotive Engineers	25 00		10		10		60		
Journeymen Barbers	9 00		10		14		64		
Bricklayers and Stonemasons	12 00	8 00	9		9		54		21
Painters and Decorators	11 00		10		9		59		12
Order of Railway Conductors No. 13	20 00								
Sarnia :									
Bro. Locomotive Firemen	12 00								
Order Railway Conductors	23 00								
Bro. Locomotive Engineers	20 00								
Schreiber :									
Bro. Locomotive Engineers	30 00								
Bro. Railway Trainmen	20 00		10		10		60		
Bro. Locomotive Engineers									
Stratford :									
Typographical Union	8 00	6 00	9		9		54		
Woodworkers	8 00		10		10		60		5
Amal. Society Engineers	10 00		10		4		54		
Bro. Railroad Trainmen	12 00		10		10		60		
Bro. Locomotive Firemen	11 00								4
Smiths Falls :									
Iron Molders	11 00		10		9		59		2
Order Railway Conductors	22 00								

Table shewing the average wages per week and hours of labor, etc.—*Concluded.*

Trade or Calling.	Average wages per week.		Hours of labor first five days.		Hours on Saturday.		Total hours per week.		Average number of weeks idle.
	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.	
	$ c.	$ c.							
Toronto:									
Pattern Makers	15 00	13 50	10		5		55		
Order Railway Conductors No. 344	15 75								
Machinists	11 00	9 50	10		5		55		
Woodworkers No. 121	12 00		10		5		55		
Bro. Locomotive Firemen No. 262									
Broommakers	7 00		10		5		55		12
Woodworkers No. 111	11 00		10		5		55		
Plasterers	14 46		8		4		44		10
Plasterers' Laborers	9 00		8		4		44		
Blacksmiths	11 75		10		5		55		
Order of Railway Conductors No. 17									
Upholsterers	12 00		9		5		50		4
Stonemasons	10 00		8		4		44		10
Bricklayers and Masons	14 00		8		4		44		15
Bro. Carpenters and Joiners	9 00	8 00	9		5		50		
Bread Salesmen	9 00		8		11		51		
Boiler Makers and Iron Ship Builders	12 00	9 00	10		5		55		4
Sheet Metal Workers	12 50	10 00	9	10	5		50	55	3
Cigarmakers	9 00		8		4		44		3
Painters and Decorators	8 50	7 25	9		5		50		12
Bookbinders	12 50		9½		4½		52		2
Metal Polishers, etc., No. 53	9 00		10		5		55		1
Printing Pressmen	14 00		10		4		54		
Mailers	14 00		8		8		48		
Woodworkers No. 34	12 00		10		5		55		
Metal Polishers No. 21	10 00	8 50	10		5		55		
Theatrical Stage									
Employees	17 00		11		13		68		12
Varnishers and Polishers	12 00		10		5		55		5
Architectural and Structural Ironworkers	12 00	8 00	9		5		50		
Typographical Union			10		4		54		6
Machinists No. 235	12 37	10 50	10		5		55		
Excelsior Assembly K. of L									
Bro. Locomotive Firemen									
Stone Cutters	18 92	16 00							20
Amal. Society Engineers	13 50		10		5		55		2
Bro. Railroad Trainmen No. 322	12 50								
Railroad Teamsters	8 80		11		9		64		
Journeymen Tailors	9 00	6 00							
Windsor:									
Bricklayers and Masons	14 00		9		9		54		20
Fed. Labor Union No. 8019									
Tinners and Plumbers	14 25		9		9		54		10
Bro. Locomotive Engineers	19 00								
Bro. Locomotive Firemen	17 25								
Woodstock:									
Iron Molders	13 00		10		9		59		10

CIRCULAR TO LABOR ORGANIZATIONS.

The following circular was issued to the labor organizations and manufacturers in Ontario:—

DEPARTMENT OF PUBLIC WORKS, ONTARIO—THE BUREAU OF LABOR.

Toronto, September, 1901.

In the report of the Ontario Bureau of Labor for 1900, a record was given of strikes and lock-outs, as far as could be ascertained, for a period including the year 1899, and to August 31st, 1900. With a view of making the history continuous, the Bureau is now engaged in an investigation of the strikes and lock-outs that have taken place in the Province from September 1st, 1900, to August 31st, 1901. With this object in view, you are asked to co-operate by filling in answers to questions on accompanying schedule, and returning same to this office as soon as possible. The assurance is given you that such information will be received in the strictest confidence and presented in the report of the Bureau in such a manner as to preclude individuality. It is desired that you return enclosed form not later than November 15th.

The Bureau will be pleased to receive from you any suggestions or remarks relating to strikes or lock-outs, or any data having reference thereto, which will give an intelligent understanding of the causes leading to these troubles, or suggest possible preventatives. By using enclosed envelope no postage is required. Thanking you in advance for this favor. Yours respectfully,

Secretary, The Labor Bureau, Ontario.

If you are not now secretary of your organization, please hand this to your successor as soon as possible.

LABOR ORGANIZATIONS' SCHEDULE.

DEPARTMENT OF PUBLIC WORKS, ONTARIO—THE BUREAU OF LABOR.

Strikes and Lock-outs—Occurring between September 1st, 1900, and August 31st, 1901.

1. Location? .....
2. Trade or calling? .....
3. Name of Organization? .....
4. Name of President for current term? .....
   Address? .....
5. Name of Corresponding Secretary for current term.. .. ..
   Address.. .....
6. Date of commencement of strike or lock-out? .....
7. Date of termination? .....
8. Cause .....
9. No. of employees involved. Male..... Female.....
10. No. of establishments affected? .....
11. Nature of settlement effected? .....
12. Total amount paid in relief to strikers? .....
13. Amount paid out for other purposes? .....
14. Total cost? .....
15. Total loss in wages to strikers? .....

If strike, erase the word lock-out; if lock-out erase the word strike. If spaces allowed for answers are insufficient, please use additional paper.

Strikes and Lockouts.—Returns from Organizations.

Location and nature of industry.	Time of beginning and ending of strike.		No. of establishments and persons affected.		Result.	Strike allowance paid out.	Loss to strikers.	Total cost of strike to organization.
	From.	To.	Establishments.	Persons.				
Strikes.						$ c.	$ c.	$ c.
Dundas—								
Machinists	Oct. 10, 1900	Jan. 13, 1901	1	60	Settled by mediation of Deputy Minister of Labor	1,850 00	4,000 00	2,100 00
Guelph—								
Brussels Carpet Weavers								
Hamilton—								
Custom Tailors	April 1, 1901	April 1, 1901	16	65	Successful		80 00	
Kingston—								
Painters and Decorators	Mar. 1, 1901	Mar. 7, 1901	4	38	Successful		500 00	
London—								
Cigarmakers	June 15, 1901	Oct. 5, 1901	1	17	Successful	236 70		236 70
Oshawa—								
Coremakers	Dec., 1901	Feb., 1901	1	42	Partly successful			
Ottawa—								
Plasterers	June 3, 1901	June 6, 1901	13	36	Successful	10 00	270 00	22 00
Sheet Metal Workers	June 1, 1901	June 17, 1991	11	54	Compromise	45 00	1,100 00	55 00
Toronto—								
Machinists	July 19, 1901	Aug. 9, 1901	1	22	Successful	375 00	1,060 00	400 00
Brass Moulders	June 21, 1901	Aug. 6	7	23	Compromise	200 00	140 00	214 00
Broom-makers	Mar. 5, 1901		1	16	Still pending			
Lockout.								
Oshawa—								
Coremakers	No date given.	Return received	Oct. 24; all then locked out.					

The returns from labor organizations reported 11 strikes and one lock-out. Returns from manufacturers reported 10 strikes.

The returns in both cases covered the period from September 1st, 1900, to August 31st, 1901. Two of the strikes reported over-lapped in the two classes of returns. Thus, there was a total of 19 strikes and one lock-out reported for this period, as against 35 strikes and two lock-outs for a similar previous period. The location of their occurence includes Dundas, Hamilton, Guelph, Kingston, London, Oshawa, Ottawa, Thorold and Toronto.

The results of the 19 strikes, and the one lock-out, were:—

Successful	7	Unsuccessful	2
Settled by compromise	7	Still pending	1
Settled by arbitration	1	No particulars	1

The strikes by trades, and the year of their occurrence are :—

Broommakers	1901	Machinists	1900 (1), 1901 (3)
Brass moulders	1901	Locomotive works	1901
Brussels carpet Weavers (not given)		Painters and decorators	1901
Custom tailors	1901	Quarrymen	1901
Coremakers	1901	Sheet metal workers	1901
Corporation Laborers	1900-1901	Street railway employees	1901
Furriers	1901		

PARTICULARS OF STRIKES AND LOCK-OUTS—Returns from Labor Organizations.

DUNDAS.

Organization affected, International Association of Machinists, Lodge No. 69—Date of commencement of strike, October 10th, 1900; date of termination, January 13th, 1901; cause of strike, the refusal of the employers to recognize a committee of their own men as competent to arrange a basis of wages, and the regulation of the number of apprentices, or a minimum rate of same; number of employees involved, 60; number of establishments affected, 1; nature of settlement, the firm, although not signing any agreement, through the intervention of the Deputy Minister of Labor, agreed to all the men asked for; total amount paid in relief to strikers, $2,100, about $250 of this went for rent, etc., total cost of strike, $2,100; loss of wages to strikers, about $4,000; in this case it was both a strike and a lock-out, as the firm refused to listen and told the men to strike if they could, and they ordered them to take out their boxes.

HAMILTON

Organization affected, Journeymen Tailors' International Union, No. 149—Date of commencement of strike, April 1st, 1901; date of termination, April 1st, noon; cause of strike, a dispute in the classification of material in first and second class list, also a demand for 10 per cent. increase in wages; number of employees involved, male 50, female 15; number of establishments affected, 16; nature of settlement, the 10 per cent. increase asked for was given, and the classification of materials settled in employees' favor; loss in wages, about $80, or half-day's wages for 65 union members.

KINGSTON.

Organization affected, Brotherhood of Painters, Decorators and Paperhangers, No. 114—Date of commencement of strike, March 1st, 1901; date of termination, March 7th; cause of strike, demand for an advance of 15c per day, and to work 9 hours instead of 10; number of employees involved, 38; number of establishments affected, 4; nature of settlement, demands of the men granted; loss in wages, about $500.00.

LONDON.

Organization affected, Cigar Makers' International Union, No. 278—Date of commencement of strike, January 15th, 1900; date of termination, October 5th, 1901; cause

of strike, reduction of wages in a union shop which they tried to make non-union, but failed, so they came to time, and the shop is union now; number of employees involved, male 13, female 4; nature of settlement, the payment of union wages, one dollar in advance of non-union; total amount paid in relief to strikers, $236.70; most of employees involved got other jobs within a short time, except three of the men, some were out two weeks and some three; they were paid $5.00 per week while on strike by the union. The union pays its membres $5.00 per week for 16 weeks, and then $3.00 per week until the strike is over, or until employed.

OSHAWA

Organization affected, Coremakers' International Union—Date of commencement of strike, December; date of termination, January; cause of strike, we went out on strike because we had to go out in the moulding shop, which heated us up, and after which we had to sit in a draught, which was most injurious to our health; number of employees involved, 42; nature of settlement, we were to shift in the manner described only in very exceptional cases; total loss in wages, about $1,200; we are sorry to say that the company have broken all their agreements with us. wa settled the strike and now we are locked out.

OTTAWA.

Organization affected, Operative Plasterers' International Association, No. 124—Date of commencement of strike, June 3rd, 1901; date of termination, June 6th, 1901; cause of strike, we demanded an increase of wages and shorter hours, namely, half holiday on Saturday; number of employees involved, male 36; number of establishments affected, 13; nature of settlement, demand of the men was granted; total amount paid in relief to strikers, $12.00; total cost, $22.00; loss in wages, $270.00.

Organization affected, Amalgamated Sheet Metal Workers' International Union, No. 11—Date of commencement of strike, June 1st, 1901; date of termination of strike, June 17th, 1901; cause of strike, employers ignored the demands of the union in asking for 15 per cent. increase, that none but union labor be employed, that pay be given for overtime at the rate of time and one-half, and a minimum rate of 20c per hour for all who served over four years; number of employees involved, 54; numbr of establishments affected, 11; nature of settlement, 10 per. cent. increase of wages, recognition of the union, time and one-half overtime, double time after 12 p.m., and four-year apprenticeship clause; had to drop demand for union labor and minimum wage; total amount paid in relief to strikers, $45.00; amount paid for other purposes, $10.00; total cost, $55.00; loss in wages, about $1,100.

TORONTO.

Organization affected, International Association of Machinists, Lodge 235—Date of commencement of strike, July 19th, 1901; date of termination, August 9th, 1901; cause of strike, refusal to use unfair castings, as the brass molders were on strike; number of employees involved, 22; number of establishments affected, 1; nature of settlement, satisfactory to union brass molders; total amount paid in relief to strikers, $375; amount paid for other purposes, $25; total cost, $400; loss in wages, $1,060.

Organization affected, Brass Molders' International Union, No. 33—Date of commencement of strike, June 21st, 1901; date of termination, August 6th; cause of strike, refusal of employers to sign an agreement granting the men a working week of 55 hours, and overtime at rate of time and a half, and the limitation of apprentices to one to a shop; wages to be 25c per hour; number of employees involved, 23; number of establishments affected, 7; hours, and overtime at rate of time and a half, and the limitation of apprentices to one to a shop; wages to be 25c. per hour; number of employees involved, 23; number of establishments affected, 7; nature of settlement, a minimum scale of 22½c. per hour, 55 hours per week; all the nature of settlement, a minimum scale of 22½c per hour, 55 hours per week; all the men whose places had not been filled went back to work; total amount paid in relief to strikers, $200; paid for other purposes, $14.00; total cost, $214; loss in wages, $140;

during the strike quite a few left town and procured employment elsewhere, and, also, there were some who went into business for themselves.

Organization affected, Broommakers' International Union, No. 55—Date of commencement of strike, March 5th, 1901; date of termination, still on (October 14); cause of strike, discharge of a union man; number of employees involved, 16; total amount paid in relief to strikers, $54.00; paid out for other purposes, $25.00; total cost, $79.00; loss in wages, $784 for six weeks.

PARTICULARS OF STRIKES AND LOCK-OUTS.—Returns from Manufacturers.

HAMILTON.

Merchant Tailor—Date of strike, April, 1901; date of termination, the strike lasted one day; employees were members of a labor organization; cause of strike, a difference on the classification of goods, which governed the prices of making; number of employees involved, 8; nature of settlement, an advance of from 10 per cent. to 25 per cent. in wages; there was no loss to firm except in the advanced wages.

KINGSTON.

Corporation of the City of Kingston—Date of strike, November 30, 1900, and January 11, 1901; date of termination, December 4th, 1900, and February 4th, 1901; employees were members of a labor organization; cause of trouble, the union men refused to work with the non-union men; number of employees involved, 22; nature of settlement, the city claimed that all taxpayers were entitled to work, whether union or non-union, and the men resumed work on this understanding.

Electric Railway Company—Date of lock-out, June 8th, 1901; date of termination June 22, 1901; employees were members of a labor organization; cause of trouble, demand for increased pay, recognition of the union, and the employment of only union labor; number of employees involved, 22; nature of settlement, slight increase in pay, and the company to have the right to employ any kind of labor; how many lost situation as a result of trouble, 2; loss to firm, $350.

Locomotive Company—Date of strike, May 16; date of termination, May 21st; employees were members of a labor organization; cause of trouble, a request for increased wages had been made and was under consideration, in the meantime an employee was discharged with reason; the men demanded his reinstatement, and the immediate granting of all their previous requests for increased pay, and struck to enforce same; nature of settlement, the discharged man was not re-instated, the increases were given in some cases and refused in others; how many lost situation as a result of trouble, 1; loss to firm, about $5,000.

OTTAWA.

Machine Shop—Date of strike, May 20th, 1901; date of termination, about September 5th; cause of trouble, men demanded increase of 12½ per cent. in wages, and a nine-hour day with ten hours' pay; number of employees involved, 11; nature of settlement, men came back at the old rates, but were given 5 per cent. increase voluntarily by the employers; loss to firm, $500.

THOROLD.

Contracting Company—Date of strike, July 30th, 1901; date of termination, August 15th, 1901; employees claimed to be members of a labor organization; cause of trouble,

the men demanded shorter hours and higher wages, they were receiving as high wages as the work commanded anywhere in the Province; number of employees involved, 30; nature of settlement, the strike disintegrated, the men returned at the old rates, one hour less being granted on Saturdays; one arrest was made during trouble; how many lost situation, 8 or 10, 5 of the ringleaders were not re-employed; loss to firm, cannot estimate accurately, not less than $500; the strikers were quarrymen, drillers, engineers and derrick men, they thought we were rushed for stone and took advantage of the situation.

TORONTO.

Furriers—Date of strike, about January 15th, 1901; date of termination, about January 24th; a few of the men were members of a labor organization, cause of trouble, one male operator (machine) was put in with girls, and could do double the amount of work of one girl, consequently they did not want him there; number of employees involved, male 10, female about 30; nature of settlement, we explained our position, viz., that as he drew over double the amount of wages they were paid, he must do more work; about three girls and two men lost their situations as a result of the trouble; loss to firm, principally in filling orders.

Manufacturers of Woodenware, Etc.—Date of commencement of strike, March 5th, 1901, the broom-makers went out on strike; date of termination, not yet settled, and not likely to be; employees were members of a labor organization; cause of trouble, we had in our employ one man who had learnt his trade in the Central Prison, we refused to discharge him and the others went out on strike; number of employees involved, 30; no settlement has been effected; the men were all replaced two weeks after the strike; all lost situation as a result of the trouble.

Machinist—Date of strike, April 1st, 1901; date of termination, April 2nd, 1901; employees were members of a labor organization; cause of trouble, change of foreman; number of employees involved, 17; nature of settlement, old foreman was reinstated; loss to firm, about $50.00.

MANUFACTURERS' SCHEDULE.

No. 2, 1901. Office No.....

DEPARTMENT OF PUBLIC WORKS, ONTARIO— THE BUREAU OF LABOR.

1. Name of Firm? ....
2. Location ....
3. Have you had any strike or lock-out among your employees during the period from September 1st, 1900, to August 31st, 1901? ....
4. Date of strike or lock-out?..... ....
5. Date of termination? ....
6. Were employees members of a labor organization? ....
7. Cause of trouble? ....
8. No. of employees involved, Male? .... Female?.....
9. What was the nature of the settlement effected? ....
10. Were any arrests made during trouble? ....
11. How many lost situation as a result of trouble? .....
12. What was loss to firm as a result of trouble? ....

Where blank spaces left for answers are insufficient, please use additional paper. If strike, erase the word lock-out; if lock-out, erase the word strike.

Strikes and Lockouts.—Returns by Employers.

Location and nature of industry. Strikes.	Time of beginning and ending of strike.		No. of establishments and persons affected.		Results.	Loss to employers.
	From.	To.	Establishments.	Persons		
Hamilton—						$ c.
Custom Tailors	Lasted one day		1	8	Compromise	
Kingston—						
Corporation work	Nov. 30, 1900	Dec. 4, 1900	1	22	Strikers unsuccessful	
" "	Jan. 11, 1901	Feb. 4, 1901	1	22	" "	
Street Railway Co	June 8, 1901	June 22, 1901	1	22	Compromise	350 00
Locomotive works	May 16, 1901	May 21, 1901	1	....	Compromise	5,000 00
Ottawa—						
Machinery	May 20, 1901	Sept. 5, 1901	1	11	Compromise	
Thorold—						
Quarrymen	July 30, 1901	Aug. 15, 1901	1	30	Small compromise	500 00
Toronto—						
Furriers	Jan. 15 1901	Jan. 24, 1901	1	40	Strikers unsuccessful	
Broom-making	Mar. 5, 1901		1	30	Still pending	
Machinist	April 1, 1901	April 2, 1901	1	17	Strikers successful	50 00

Circular to Manufacturers.

DEPARTMENT OF PUBLIC WORKS, ONTARIO.—THE BUREAU OF LABOR.

Toronto, April 12th. 1901.

The Act creating The Bureau of Labor, passed by the Ontario Legislature in April 1900, gives power to The Bureau, among its other provisions, to collect and publish information that will give an intelligent understanding of the relations between labor and capital, together with such a knowledge of the industries of the Province as The Bureau may be able to gather. It is the purpose of The Bureau to make an investigation of the industries of the Province during the year 1900, and for the accomplishment of this object The Bureau seeks your co-operation, giving you the assurance that information thus obtained will be used only in tabulated form, and in no way that would disclose the identity of the persons supplying such information to The Bureau, except in the most general way.

The Bureau, confident that the provincial merchants will render the assistance asked for, respectfully requests that the enclosed schedule be filled in at your earliest convenience, and returned to this office in enclosed envelope, which does not require postage if not sealed.

Thanking you in advance for this courtesy.

Yours respectfully,

R. GLOCKLING,
Secretary The Labor Bureau, Ontario.

Manufacturers' Schedule No. 1.—1901. Office No.....

DEPARTMENT OF PUBLIC WORKS, ONTARIO.—THE BUREAU OF LABOR.

The following questions refer to the year ending December 31st, 1900.

1.—Name of Firm? .....
2.—Post-office address? .....
3.—Character of business? .....
4.—Capital employed, including plant? .....
5.—Number of days in operation during year? .....
6.—Gross value of product manufactured during year? .....
7.—Has the production increased or decreased during year? .....
8.—If either, what per cent? .....
9.—Value of materials used in production during year, including fuel, gas, etc?.....
10.—Total taxes paid during year? .....
11.—Total insurance paid during year? .....
12.—Amount invested, if any, in permanent repairs or plant enlargement during year? .....
13.—Total number of employees during year (wage-earners only), male .....
female .....
14.—Total wages paid during year to wage-earners only, male .....
female .....
15.—Highest weekly wages paid, male .....female.....
16.—Lowest weekly wages paid, male .....female.....
17.—Total number of salaried clerks and officials, male .....female.....
18.—Total salaries paid to clerks, officials, etc., during year .....
19.—Have wages been increased or decreased during the year? .....
20.—If either, what per cent.? .....
21.—Which class of employees has increase or decrease affected, if both, what per cent. in either case? .....

INDUSTRIAL STATISTICS.

With a view to a collection of data of the industries of the Province, a circular was forwarded to 2,500 representative firms throughout the Province. Only 570 replies were received, and of these many were of such an incomplete character that 305 only were available, any bearing the slightest imprint of inaccuracy being carefully excluded. The value of this data will be enhanced by time, as year after year comparison will show progress or otherwise; this being the intention of this character of investigation. Many manufacturers demurred at giving the information, particularly that of the gross value of the product. With time and increased facilities the Bureau will doubtless overcome this reticence to contribute to public data on the part of the different elements of the people of our Province.

The object of the present investigation was primarily to show the relative per centage of the labor cost to the gross value of products in Ontario. Future investigation will go further afield and with the co-operation of employers and employees alike will construct such information as will be invaluable to all.

As will be seen by reference to table, there were 305 establishments from which available statements were received, giving amount of wages paid, the number employed, the days in operation and the value of the product. The 305 manufacturers had in their employ an average of 14,240 persons during the year 1900. The number of days these establishments were in operation was 87,308; the amount disbursed by them in wages during that period was $4,966,622.00; the average annual earnings per person were therefore $325.29, and the average daily wage rate was $1.23.

The gross value of the product, which may be considered as the manufactured product or the output of these 305 establishments was $23,031,579.00. Upon comparing this sum with the amount paid in wages it is seen that labor received 21.69 per cent. of the commercial value of the manufactured product. The proportion of the output or gross product value distributed among the several accounts of cost of material, interest, taxes, rent, insurance, miscellaneous expenses and profit, was 78.31 per cent. It will be discovered in studying the tables and making comparisons that there are many establishments which, while being classified under similar captions, show a considerable discrepancy when the ratio of wages paid to the value of the product is considered. This will be understood when it is explained that in many cases much of the material used in the process of manufacture by one establishment may be, and oftentimes is, the unfinished product of another. Hence a smaller labor cost in one instance and a greater proportion of expense for labor in the other. Of course, therefore, there will be a reversal of conditions as to the cost of material, etc., in such instances.

Number of circulars issued	2,518
Number of replies received	883
Number of replies available	305
Number of establishments represented	305
Number of employees	14,240
Number of days in operation	87,308
Amount paid in wages	4,996,622 00
Average annual earnings per person	325 29
Average daily wage rate	1 23
Gross value of product	$23,031,579 00
Per cent. of value paid in wages	21.69
Per cent. balance of cost	78.31

TABLE SHEWING WAGE RATE AND LABOR COST.

INDUSTRY.—AGRICULTURAL IMPLEMENTS.

Schedule No.	Average No. of persons employed.	No. of days in operation.	Amount paid in wages	Gross value of product.	Employees' average annual earnings.	Employees' daily wage rate.	Per cent. labor cost of gross value of product.	Per cent. cost of material, interest, insurance, taxes, etc., and profit.
			$	$	$ c.	$ c.		
368	55	300	17,100	48,000	310 90	1 03	35.62	64 38
265	24	300	10,200	20,000	425 00	1 41	51.	49.
227	76	290	28,200	75,000	371 05	1 27	37 6	62.4
175	76	300	38,350	110.000	504 60	1 68	34.86	65.14
101	16	308	5,390	9,700	336 87	1 09	55.56	44.44
93	51	208	12,180	24,500	248 62	1 19	51.75	48.25
56	16	300	5,000	25.000	312 50	1 04	20.	80.
32	11	313	2,200	7,050	200 00	62	31 20	68 80
25	11	310	4,000	12.000	363 63	1 17	33.33	66.67
404	410	290	155,000	800,000	378 04	1 30	19 37	80.63
406	222	305	91,500	400,000	412 16	1 35	22.87	77.13
	968	3,234	369,120	1,531,250				

INDUSTRY.—BREWERS AND MALTSTERS.

259	44	313	18,500	120,000	420 45	1 34	15.41	84 59
211	35	313	14,500	100.000	414 28	1 36	14.5	85.5
200	22	300	7 600	30,000	345 45	1 15	25.33	74.67
173	12	305	7,450	40,400	620 83	2 03	18.44	81.56
472	16	313	5,990	39,600	374 37	1 19	15.12	84.88
	129	1,544	53,040	330,000				

INDUSTRY.—CANNING FACTORIES.

271	102	104	7,125	35,000	69 85	67	20.28	79.72
43	137	260	10,250	115,000	74 81	28	8.91	91.09
476	61	125	3,300	9,000	54 09	43	36 66	63.34
413	24	65	1,025	2,600	42 70	65	39.42	60.58
360	53	180	11,500	35,000	216 98	1 20	32.85	67.15
	377	734	33,200	296,600				

INDUSTRY.—CARRIAGE AND VEHICLE MANUFACTURERS.

98	54	300	23,000	90,000	425 92	1 41	25.55	74.45
327	106	270	58,000	200,000	547 16	2 02	29.	71.
399	12	305	5,000	14.000	416 66	1 36	35.71	64.29
387	2	305	300	1,800	150 00	49	16.66	83.34
388	12	300	4,800	16,000	400 00	1 33	30.	70.
416	143	305	54,175	316,800	378 62	1 24	17 09	82.91
436	6	305	2,600	55,000	433 33	1 42	4.72	95.28
103	5	305	800	8,000	160 00	52	10.	90.
182	5	300	1,000	2,000	200 00	66	50.	50.
244	104	300	41,000	240,000	394 23	1 31	17.08	82.92
278	2	305	900	2,000	450 00	1 47	45.	55
302	58	300	21,500	75,000	370 68	1 23	28.66	71 34
320	58	300	18,000	75,000	310 34	1 03	24.	76.
370	2	300	800	4,000	400 00	1 33	20.	80.
358	73	300	35,600	125.000	487 67	1 62	28.48	71.52
367	9	305	4,500	11,000	500 00	1 63	40.90	59.10
	651	4,805	271,975	1,235,600				

TABLE SHEWING WAGE RATE AND LABOR COST.—*Continued.*

INDUSTRY.—DAIRY PRODUCTS.

Schedule No.	Average No. of persons employed.	No. of days in operation.	Amount paid in wages.	Gross value of product.	Employees' annual average earnings.	Employees' daily wage rate.	Per cent. labor cost of gross value of product.	Per cent. cost of material, interest, insurance, taxes, etc., and profit.
			$	$	$ c.	$ c.		
332	8	195	600	39,000	75 00	38	10.53	89.47
342	.....	305	2,600	18,000	....	.....	14.44	85.56
328	.....	280	80,000	200,000	.....	40	40.	60.
279	17	200	3,100	30,000	182 35	91	10.33	89.67
270	5	365	1,740	7,950	348 00	96	21.25	78.75
267	10	180	1,775	8,175	177 50	98	21.71	78.29
243	.....	155	250	10,020	....	.....	2.49	98.51
181	4	155	1,070	8,708	267 50	1 72	12.28	87.72
127	6	310	7,100	38,765	1,183 33	3 81	18.31	81.69
5	14	305	7,800	35,000	557 14	1 82	22.28	77.72
438	.....	200	1,860	8,500	.. ..	.....	21.88	78.12
417	11	305	3,820	37,125	347 27	1 13	10.28	89.72
411	4	200	440	11,250	110 00	2 20	3.91	96.09
398	8	200	1,650	4,000	206 25	1 03	41.25	58.75
	87	3,355	113,805	456,493				

INDUSTRY.—FLOUR MILLS.

35	5	300	1,500	75,000	300 00	1 00	2	.98
361	3	300	760	25,000	253 33	84	3.04	96.96
326	8	300	3,500	67,000	437 50	1 45	5.22	94.78
318	4	250	1,650	45,000	412 50	1 65	3.66	96.34
317	8	235	4,000	81,000	500 00	2 12	4.93	95.07
303	68	305	31,175	921,800	531 98	1 74	3.38	96.62
301	17	300	6,600	132,680	388 23	1 29	4.97	95.03
297	11	305	6,140	89,500	558 18	1 83	6.86	93.14
295	5	300	2,200	40,000	440 00	1 46	5.5	94.5
288	4	305	1,600	30 000	400 00	1 31	5.33	94.67
261	86	300	36,000	500,000	418 60	1 39	7.2	92.8
253	8	305	4,700	50,000	587 50	1 92	9.4	90.6
249	8	300	3,100	30,000	387 50	1 29	10.33	89.67
235	8	300	3,100	30.000	388 50	1 29	10.33	89.67
226	6	300	2,750	50,000	458 33	1 52	5.5	94.5
206	18	305	7,900	130,000	438 88	1 43	6.07	93.93
202	4	305	1,390	25,000	347 50	1 13	5.56	94.44
165	15	300	5,270	100,000	351 33	1 17	5.27	94.73
156	10	300	5,600	83,500	560 00	1 86	6.73	93.27
134	1	300	240	10,000	240 00	80	2.4	97.6
125	4	300	1,000	12,000	250 00	83	8.33	91.67
118	6	365	3,500	10.000	583 33	1 57	35.	65.
89	17	312	10,250	85.000	602 94	1 93	12.05	87.95
81	6	306	2,550	25,000	425 00	1 41	10.2	89.8
41	6	305	2,400	25,000	400 00	1 31	9.6	90.4
374	25	305	9,500	75,000	380 00	1 24	12.66	87.34
477	5	360	2,180	25,000	436 00	1 45	8.72	91.28
463	6	300	2,775	45,000	462 50	1 54	6.16	93.84
447	3	300	600	20,000	200 00	66	3.	97.
435	31	250	17,350	600,000	559 67	2 23	2.89	97.11
433	7	365	3,200	35,000	457 14	1 25	9.14	90.86
405	2	300	650	15,000	325 00	1 08	4.33	95.67
	413	9,677	185,130	3,487,480				

TABLE SHEWING WAGE RATE AND LABOR COST.—*Continued.*

INDUSTRY—FURNITURE.

Schedule No.	Average No. of persons employed.	No. of days in operation.	Amount paid in wages.	Gross value of product.	Employees' average annual earnings.	Employees' daily wage rate.	Per cent. labor cost of gross value of product.	Per cent. cost of material, interest, insurance, taxes, etc., and profit.
			$	$	$ c.	$ c.		
414	4	280	1,020	3,000	255 00	91	34.	66.6
33	30	305	7,000	17,000	233 33	76	41.17	58.83
80	40	310	13,000	35,000	325 00	1 04	37.14	62 86
147	47	286	12,600	30,410	268 08	93	41.04	58.96
192	84	100	9,500	18,000	113 09	1 13	52.77	47 23
222	43	305	24,200	40,000	562 79	1 84	60.5	39.95
223	250	300	87,500	250,000	350 00	1 16	35.	65.
245	59	305	23,000	70,000	389 83	1 27	32.85	67 15
357	55	300	17,750	50,000	322 72	1 07	35.5	64 95
310	50	302	17,750	64,400	355 00	1 17	27.56	72.44
	662	2,793	213,320	577,810				

INDUSTRY—GAS, ELECTRIC LIGHT, ETC.

87	67	365	34,800	98,265	519 40	1 42	35 36	64 64
29	5	365	3,495	18,365	693 00	1 62	19.03	80.97
201	8	365	2,450	4,150	306 25	83	59.03	40 97
193	16	365	6,600	20,000	412 50	1 13	33.	67.
96	5	365	1,270	3,600	254 00	69	35.27	64.73
92	.....	365	12,600	26,000	.....	.....	48 46	51 54
475	4	365	900	2,500	225 00	61	36.	64.
431	4	360	1,450	3,500	362 50	1 00	41.42	58 58
296	4	365	2,000	8,800	500 00	1 36	22.72	77.28
562	3	365	1,300	2,800	433 33	1 14	46.42	53 58
209	24	365	16,050	88,200	668 75	1 83	18.19	81.81
263	2	365	400	2,480	200 00	54	16.12	83.88
276	4	365	986	3,600	246 50	67	27.39	72 61
351	293	365	197,535	734,935	674 18	1 84	26.87	73.13
247	4	365	2,300	17,685	575 00	1 57	13 05	86.95
366	348	305	169,000	1,862,745	485 63	1 59	9.07	90.93
	791	5,775	453,136	2,896,625				

INDUSTRY—LUMBER.

291	55	300	21,750	50,000	395 45	1 31	43.5	56 95
286	310	200	132,000	250,000	425 80	2 12	52 8	47.92
282	35	120	7,500	60,000	214 24	1 78	12.5	87.95
280	4	225	1,000	10,000	250 00	1 11	10.	90.
126	13	300	5,000	50,000	384 61	1 28	10.	90.
82	82	132	8,400	15,000	102 43	77	56.	44.
79	69	200	12,500	50,000	171 15	85	25.	75.
67	185	305	67,300	125,000	363 78	1 19	53.84	46.16
460	15	250	5,400	20,000	360 00	1 44	27.	73.
454	32	200	11,500	50,000	359 37	1 79	23.	77.
427	21	255	5,600	12,000	266 66	1 04	46 66	53.34
424	5	200	1,400	4,000	280 00	1 40	35.	65
419	77	180	22,760	97,000	295 57	1 64	23.46	76.54
418	7	260	1,700	12,000	142 85	54	14.16	85.84
	910	3,127	304,810	805,000				

TABLE SHEWING WAGE RATE AND LABOR COST.—*Continued.*

INDUSTRY—MACHINERY AND IRON FOUNDRIES.

Schedule No.	Average No. of persons employed.	No. of days in operation.	Amount paid in wages.	Gross value of product.	Employees' average annual earnings.	Employees' daily wage rate.	Per cent. labor cost of gross value of product.	Per cent. cost of material, interest, insurance, taxes, etc., and profit.
			$	$	$ c.	$ c.		
356	36	190	9,600	14,000	309 67	1 62	68.57	31.73
343	15	300	8,100	23,000	540 00	1 80	35.21	64.79
326	23	304	9,600	12,700	417 39	1 37	75.59	24.41
321	167	285	72,500	200,000	434 13	1 52	36.25	63.75
299	5	300	2,800	7,200	560 00	1 86	38.88	61.12
285	31	300	8,450	30,000	272 58	91	28.16	71.84
264	124	295	54,330	135,500	438 14	1 48	40.09	59.91
257	7	304	4,450	57,100	635 71	2 09	7.79	92.21
248	35	300	17,300	40,000	494 28	1 64	43 25	56.75
241	11	306	3,475	67,000	315 90	1 09	5.18	94.82
215	99	280	46,150	110,000	466 16	1 66	41.90	58.10
214	25	300	8,500	50,000	340 00	1 13	17.	83.
204	9	300	5,000	20,000	555 55	1 85	25.	75.
177	25	305	13,285	50,000	531 40	1 74	26.57	73 43
171	10	300	4,325	8,000	432 50	1 44	54.06	45.94
159	8	305	3,400	10,900	425 00	1 39	34.	66.
158	46	330	23,050	60,000	501 08	1 67	38.41	61.59
145	5	300	2,300	70,000	460 00	1 50	3.28	96.72
111	144	270	43,950	350,000	305 20	1 13	12.27	87.73
107	157	305	62,000	250,000	394 90	1 29	24.8	75.92
95	3	300	2,000	50,000	666 66	2 22	4.	96.
60	19	300	8,900	12,000	468 42	1 56	74.16	25.84
54	40	305	13,950	32,000	348 75	1 14	43.59	56.41
44	4	305	1,250	2,500	312 50	1 02	50.	50.
13	222	300	62,600	500,000	281 98	93	12.52	87.48
9	8	290	5,625	24,000	703 12	2 42	23.43	76 57
378	40	300	22,000	60,000	550 00	1 83	36.66	63.34
473	7	300	1,500	10,000	214 28	71	15.	85.
376	400	305	48,000	55,000	120 00	39	87.27	12.73
457	2	312	750	1,800	375 00	1 20	41.66	58 34
456	189	300	57,000	175,000	301 58	1 00	32.57	67.43
445	57	305	22,000	80,000	385 96	1 26	27.5	72.95
	1,876	9,576	597,140	2,566,806				

MANUFACTURES—BRICK, CEMENT, ETC.

389	5	155	1,400	5,000	280 00	1 16	28.	72.
392	9	120	1,100	3,000	122 22	1 01	36.66	63.34
430	171	305	44,055	192,100	257 63	84	22.93	77 07
434	28	300	9,270	25,250	331 07	1 10	36.71	63.29
441	14	90	2,000	5,000	142 92	1 58	40.	60.
4	25	300	11,050	30,000	442 00	1 47	36.33	63.67
162	43	120	10,000	15,000	232 55	1 93	66 66	33.34
217	11	162	1,503	4,150	136 63	84	3 62	96.38
256	11	156	2,700	5,986	245 45	1 57	45.10	54.90
260	7	100	555	3,000	79 28	79	18.5	81.95
	324	1,808	83,633	288,486				

TABLE SHEWING WAGE RATE AND LABOR COST.—*Continued.*

INDUSTRY—PLANING MILLS.

Schedule No.	Average No. of persons employed.	No. of days in operation.	Amount paid in wages.	Gross value of product.	Employees' annual average earnings.	Employees' daily wage rate.	Per cent. labor cost of gross value of product.	Per cent. cost of material, interest, insurance, taxes, etc., and profit.
			$	$	$ c.	$ c.		
266	6	220	2,275	6,000	379 16	1 72	37.91	62.09
229	10	305	3,360	20,000	336 00	1 10	16.8	83.92
157	71	300	17,400	100,000	245 07	81	17.4	82.96
150	11	300	3,500	13,000	318 18	1 06	26.92	73.08
141	25	200	5,000	20,000	200 00	1 00	25.	75.
132	9	200	1 800	6,800	200 00	1 00	26.47	73.53
121	7	286	2,560	12,000	365 71	1 27	21.33	78.67
100	16	300	6,500	30,000	406 25	1 35	21.66	78 34
77	5	305	1,350	6,000	270 00	88	22.5	77.95
72	9	305	3,100	15,000	344 44	1 12	20.66	79.34
71	10	300	6,000	12,000	600 00	2 00	50.	50.
59	5	305	2,000	10,000	400 00	1 31	20.	80.
58	14	280	4,200	11,000	300 00	1 07	38.18	61.82
51	26	305	9,350	55,000	359 61	1 17	17.	83.
28	40	300	4,320	50,000	358 00	1 19	28.64	71.36
15	35	305	16,500	50,000	471 42	1 54	33	67.
401	58	300	23,500	79,000	405 17	1 35	29.77	70.23
	357	4,816	122,715	495,800				

INDUSTRY—PRINTING AND PUBLISHING.

11	35	306	16,700	33,000	477 14	1 55	50.6	49.94
10	79	305	18,200	54,400	330 38	75	33.08	67.92
176	16	313	5,000	10,000	312 50	99	50.	50.
314	49	310	19,000	52,000	452 05	1 45	36.53	63.47
354	4	305	1,040	2,500	260 00	85	41.6	58.94
433	7	313	1,344	4,000	192 00	61	33.6	66.94
432	7	305	1,500	7,500	214 28	70	20.	80.
377	11	300	3,600	8,500	327 27	1 09	42.35	57.65
1	4	300	1,250	3,000	312 50	1 04	41.66	58.34
22	19	300	8,550	15,000	450 00	1 50	57.	43.
57	53	310	18,840	28,000	355 47	1 14	67.42	32.58
75	250	305	75.000	250,000	300 00	98	30.	70.
115	10	300	3,800	9,000	380 00	1 26	42.22	57.78
142	14	305	5,000	8,000	357 14	1 18	62.5	37.95
144	6	312	1,850	3,400	308 33	98	54.41	45.59
172	33	308	15,550	34,000	471 21	1 80	45 73	54.27
195	3	313	884	1,200	294 66	90	73.66	26.34
268	5	310	400	1,600	80 00	25	25.	75.
272	20	304	8,000	12,000	400 00	1 31	66 66	33.34
287	15	310	5.100	16,000	340 00	1 09	31.87	68.13
348	4	313	700	3,000	175 00	55	23.33	76.67
	644	6,447	211,308	556,100				

INDUSTRY—PIANOS AND ORGANS.

36	173	305	55,250	150,000	319 36	1 04	36.83	63.17
66	46	300	19,800	75,000	430 43	1 43	26.4	73.96
312	80	300	27,250	67,000	340 62	1 13	40.67	59.33
23	45	305	5,300	50,000	117 77	38	10.6	89.94
481	179	305	98,760	175,000	551 73	1 80	56.43	43.57
	523	1,515	206,060	517,000				

TABLE SHEWING WAGE RATE AND LABOR COST.—*Continued.*

INDUSTRY.—SASH, DOOR AND BLINDS.

Schedule No.	Average No. of persons employed.	No. of days in operation.	Amount paid in wages.	Gross value of product.	Employees' average annual earnings.	Employees' daily wage rate.	Per cent. labor cost of gross value of product.	Per cent. cost of material, interest, insurance, taxes, etc., and profit.
			$	$	$ c.	$ c.		
363	27	305	2,000	30,000	444 44	1 12	40.	60.
359	6	240	2,200	7,500	366 66	1 52	29.33	70.67
337	4	300	3,000	6,000	750 00	2 50	50.	50.
129	5	250	2,000	3,500	400 00	1 60	57.14	42.86
120	9	300	3,000	12,000	333 33	1 11	25.	75.
114	8	305	1,200	5,000	150 00	49	24.	76.
474	12	285	3,800	10,725	316 66	1 11	35.43	64.57
450	6	280	1,500	3,500	250 00	8 89	42.85	57.15
	77	2,265	28,700	68,225				

INDUSTRY.—WOOD SPECIALTIES.

880	29	250	4,250	15,000	146 55	58	28.33	71.67
446	11	225	3,895	30,000	354 09	1 57	12.98	87.02
452	15	200	3,000	10,000	200 00	1 00	30.70	69.3
14	11	300	4,500	20,000	409 09	1 36	22.5	77.95
113	54	305	16,800	40,000	311 11	1 02	42.58	57.42
197	27	305	9,525	25,000	352 40	1 15	38.1	61.93
203	23	305	6,100	50,000	295 65	96	13.6	86.94
224	33	280	8,750	30,000	265 15	94	29.16	70.84
307	8	260	1,500	5,000	187 50	72	30.70	69.30
329	25	200	6,000	12,000	240 00	1 20	50.5	49.95
485	116	305	44,560	65,160	384 13	1 25	56.43	43.57
	352	2,935	109,780	302,160				

INDUSTRY.—WOOLLENS AND COTTONS.

210	75	300	29,700	113,250	396 00	1 32	26.22	73.78
349	52	306	12,000	50,000	230 76	76	24.	76.
319	16	300	3,450	25,900	215 62	71	13.32	86.68
308	5	250	1,250	4,250	250 00	1 00	29 41	70.59
293	16	300	4,600	21,500	287 50	95	21.39	78.61
269	11	275	2,550	15,000	231 81	84	17.	83.
233	10	140	725	3,700	72 50	51	19.65	80.35
196	78	290	16,750	62,000	214 73	74	27.01	72.99
160	40	305	12,525	62,000	313 12	1 02	20.20	79.80
137	50	190	8,000	10,000	160 00	84	80.	20.
124	4	150	550	1,000	137 50	91	55.	45.
117	5	200	725	4,000	145 00	72	18.12	81.88
62	51	300	13,200	80,000	258 82	86	16.5	83.95
30	35	305	10,500	20,000	300 00	98	52 5	47.95
440	7	260	1,900	3,000	271 42	1 04	63.33	36.67
390	42	300	11,000	40,000	261 90	87	27.5	72.95
45	86	300	23,800	90,000	276 74	92	26.44	73.56
63	288	291	80,715	356,385	280 26	93	22.64	77.36
76	36	300	5,800	20,000	161 11	53	29.	71.
178	25	300	6,150	25,000	246 00	82	24 6	75.94
198	6	230	1,400	4,350	233 33	1 01	32.18	67.82
479	1,497	303	445,000	1,986,000	297 26	94	22.40	77.60
	2,435	5,889	692,290	1,997,335				

TABLE SHEWING WAGE RATE AND LABOR COST.—*Concluded.*

MISCELLANEOUS INDUSTRIES.

Schedule No.	Average No. of persons employed.	No. of days in operation.	Amount paid in wages.	Gross value of product.	Employees' average annual earnings.	Employees' daily wage rate.	Per cent. labor cost of gross value of product.	Per cent. cost of material, interest, insurance, taxes, etc., and profit.
			$	$	$ c.	$ c.		
483	106	300	43,560	157,900	410 94	1 36	27.58	72.42
169	37	300	19,900	42 000	537 83	1 79	47 38	56.62
179	65	312	28,875	150,000	525 00	1 68	19 25	80.75
119	135	300	39,050	465.000	279 25	96	8.39	91.61
91	15	305	5,600	100,000	373 33	1 22	5 6	94.94
53	4	305	3,100	15,000	776 00	2 54	20.66	79.34
52	59	305	18,000	300,000	305 08	1 00	6.	94.
41	25	308	12,000	90,000	480 00	1 55	13.33	86.67
37	18	300	8,500	25,000	472 22	1 57	34.	66.
466	13	305	6,000	10,000	461 53	1 51	60.	40.
415	9	59	345	6,000	38 33	65	5.75	94.25
24	100	300	27,000	75,000	270 00	90	36.	64.
116	5	313	1,700	3,200	340 00	1 08	53.12	46.88
131	31	300	8,500	15,000	274 19	91	56.66	43.34
16	3	305	1,400	10,000	466 36	1 53	14.	86.
470	36	300	9,300	31,400	258 33	86	29 61	70.39
464	3	305	520	3,000	173 33	56	17 33	82.67
395	5	305	1,500	4,000	300 00	98	37.5	62.95
461	8	268	2,450	9,000	306 25	1 14	27.22	72.78
136	94	280	45,450	117,000	483 51	1 72	38.84	61.16
48	16	300	4,325	20,000	270 31	90	21.62	78.38
429	4	310	900	3,600	225 00	72	25.	75.
448	10	313	3,000	20,000	300 00	95	15.	85.
478	38	300	14,825	60,000	390 13	1 30	24.70	75.30
437	302	310	113,800	590,000	376 82	1 21	19.28	80.72
421	76	275	20,000	75.000	263 15	95	26.66	73.34
420	5	300	2,000	6,000	400 00	1 33	33.33	66.67
284	223	300	98,000	455,000	439 46	1 46	21 53	78.47
273	15	300	5,100	35,000	340 00	1 13	14.57	85.43
251	39	250	8,095	19,000	207 56	83	42.60	57.40
250	2	60	200	2,000	100 00	1 66	10	90.
212	26	305	10,450	35,375	401 92	1 31	29.54	70.46
151	4	300	1,000	4,000	250 00	43	25.	75.
444	45	300	20,600	40,000	457 77	1 52	51.5	48.95
246	15	305	6,000	20,000	400 00	1 31	30.	70.
90	36	305	5,365	80.000	149 02	48	6 7	93.93
104	75	310	86,000	250,000	480 00	1 54	14 4	85.96
252	30	300	16,500	65,000	550 00	1 83	25.38	74.62
298	11	306	3,010	24,625	273 63	89	12.22	87.78
106	26	305	6,600	100,000	253 84	83	6.6	93.94
17	70	305	27,500	118,000	392 85	1 28	9 32	90.68
394	57	298	16,000	60,000	280 70	94	26.66	73.34
383	17	305	8,500	20,000	500 00	1 63	42 5	57.95
402	35	305	24,000	52,000	685 71	2 24	46.15	53.85
38	11	200	2,940	8,500	267 27	1 33	34.58	65.42
409	22	305	7,400	18,000	336 36	1 10	41.11	58.89
442	13	311	2,720	8,475	209 23	67	32.09	67.91
467	165	280	53,500	175,000	324 24	1 15	30.57	69.43
465	44	300	15,170	71,000	344 77	1 14	21.36	78.64
403	308	260	78.500	300,000	254 87	98	26 16	73.84
316	16	300	3,200	9,750	200 00	66	32.82	67.18
439	81	155	27,000	180,000	333 33	2 15	15.	85.
455	42	305	14,350	50,000	327 36	1 08	28.7	71.93
143	6	335	3,630	15,600	605 00	1 80	24.2	75.98
482	6	300	3,000	7,500	500 00	1 66	40.	60.
489	10	300	2,430	4,500	243 00	81	54.	46.
	2,662	16,013	947,460	4,631,815				

LABOR ORGANIZATIONS IN THE PROVINCE OF ONTARIO SUBORDINATE TO INTERNATIONAL ORGANIZATIONS.

American Federation of Labor. Headquarters, Washington, D.C.

American Federation of Musicians. Headquarters, St. Louis, Mo.

Allied Metal Mechanics. Headquarters, Toledo, Ohio.

Amalgamated Society of Carpenters and Joiners. Headquarters, England. American headquarters, New York City.

Amalgamated Society of Engineers. Headquarters, London, Eng. American headquarters, New York City.

Amalgamated Wood Workers' International Union of America. Headquarters, Chicago, Illinois.

Amalgamated Association of Street Car Employees of America. Headquarters, Detroit, Michigan.

Amalgamated Sheet Metal Workers' International Union of America. Headquarters, Kansas City, Mo.

Amalgamated Meat Cutters and Butcher Workmen of North America. Headquarters, Syracuse, N. Y.

Bricklayers' and Masons' International Union of America. Headquarters, North Adams, Massachusetts.

Brotherhood of Painters, Decorators and Paper Hangers of America. Headquarters, Lafayette, Ind.

Broom Makers' International Union. Headquarters, Galesburg, Ill.

Brotherhood of Railway Trainmen. Headquarters, Cleveland, Ohio.

Brotherhood of Locomotive Firemen. Headquarters, Peoria, Ill.

Brotherhood of Locomotive Engineers. Headquarters, Cleveland, Ohio.

Brotherhood of Railroad Trackmen. Headquarters, St. Louis, Mo.

Brotherhood of Boiler Makers and Iron Ship Builders. Headquarters, Kansas City, Kansas.

Brotherhood of Electrical Workers of America. Headquarters, Rochester, N.Y.

Boot and Shoe Workers' Union. Headquarters, Boston, Mass.

Cigar Makers' International Union of America. Headquarters, Chicago, Ill.

Core Makers' International Union. Headquarters, Boston, Mass.

Carriage and Waggon Makers' International Union. Headquarters, Cleveland, O.

Glass Bottle Blowers' Association of the United States and Canada. Headquarters, Philadelphia, Pa.

Hotel and Restaurant Employees' International Alliance, and Bartenders' International League of America. Headquarters, Cincinnati, Ohio.

International Protective Laborers' Union. Headquarters, Lowell, Mass.

International Wood Carvers' Association of North America. Headquraters, Covington, Ky.

International Brotherhood of Bookbinders. Headquarters, Chicago. Ill.

International Brotherhood of Blacksmiths. Headquarters, Moline, Ill.

International Union of Horseshoers of the United States and Canada. Headquarters, Denver, Colorado.

International Typographical Union. Headquarters, Indianapolis, Ind.

International Printing Pressmen and Assistants' Union of North America. Headquarters, Brooklyn, N. Y.

International Association of Machinists. Headquarters, Washington, D. C.

International Association of Watch Case Engravers. Headquarters, Brooklyn, N.Y.

International Bridge and Structural Iron Workers. Headquarters, Pittsburg, Pa.

International Protective Retail Clerks. Headquarters, Denver, Col.

International Union Team Drivers. Headquarters. Detroit, Mich.

International Union of Jewellery Workers. Headquarters, New York City.

International Union of Wood, Wire and Metal Lathers. Headquarters, Columbus, O.
International Association of Longshoremen. Headquarters, Detroit, Mich.
International Plate Printers of North America. Headquarters, Dorchester, Mass.
Ironmolders' Union of North America. Headquarters, Cincinnati, Ohio.
Journeymen Tailors' Union of America. Headquarters, Bloomington, Ill.
Journeymen Barbers' International Union of America. Headquarters, Cleveland, Ohio.
Journeymen Bakers' and Confectioners' International Union of America. Headquarters, Cleveland, Ohio.
Metal Polishers', Buffers', Platers' and Brass Workers' Union of North America. Headquarters, New York City.
Order of Railroad Telegraphers. Headquarters, St. Louis, Mo.
Order of Railway Conductors. Headquarters, Cedar Rapids, Iowa.
Operative Plasterers' International Association. Headquarters, Cincinnati, Ohio.
Pattern Makers' League of North America. Headquarters, New York City.
The Knights of Labor. Headquarters, Washington, D. C.
Tobacco Workers' International Union. Headquarters, Louisville, Ky.
Upholsterers' International Union of North America. Headquarters, Chicago, Ill.
United Association, Plumbers, Gas Fitters, Steam Fitters and Steam Fitters' Helpers. Headquarters, Chicago, Ill.
United Brotherhood of Leather Workers on Horse Goods. Headquarters, Kansas City, Mo.
United Brotherhood of Carpenters and Joiners of America. Headquarters, Philadelphia, Pa.
United Garment Workers of America. Headquarters, New York City.
United Hatters of North America. Headquarters, Brooklyn, N.Y.

1901.—THE SHORTER WORK DAY.

SECURED BY LABOR ORGANIZATIONS IN THE UNITED STATES AND CANADA.

From Ninth Biennial Report of Bureau of Labor Statistics, Iowa :

The material of which this chapter is composed is designed to fill a long-left want, and has been made necessary by the many enquiries coming to the bureau from students in all walks of life.

A chronological review of the national and international trades unions, with general offices in the Union States, reveal ninety-four of such organizations, eighty-nine of which reported the date they were established; their growth by decades is as follows:

Year	1850	1860	1870	1880	1890	1900
National and international unions	1	5	4	6	22	51

The total membership in those organizations is now 1,550,247. Seventy-six organizations reported the maximum hours for a day's work previous to organization as being sixteen hours for ten crafts, fourteen hours for five crafts, twelve hours for twelve crafts, eleven hours for three crafts, ten hours for forty-seven crafts, or an average of eleven hours and one-half for a maximum day's work.

Since organization has been effected, eight crafts work twelve hours, three crafts work eleven hours, one craft works nine hours and one-half; thirty-five crafts work ten hours, seventeen crafts work nine hours, and twelve crafts work eight hours, thereby showing the average length of the maximum number of hours for a day's work has been reduced to nine hours and three-quarters.

In addition to the foregoing, twenty-eight of the thirty-five crafts listed as working ten hours per day, now have the eight and nine hour workday in operation in the strongest organized localities.

The total number working on the basis of eight hours for a maximum day, as reported, is 531,085, exclusive of such employes in the service of the government, who are not represented through organization.

Relative to that portion of the table following in this chapter which refers to strikes, this enquiry was confined to those strikes which had been reported to and conducted by the general offices, and do not include such strikes as have been conducted entirely by local effort, and many of which are never made a matter of record.

The total number of strikes here recorded for 1899 and 1900, and which were conducted by the constitutional officials of the organizations, amounted to 1,427, with 1,071 successful, 179 compromised, and 177 lost. These disputes cost the treasuries of the organizations, who reported this item, a total of $1,293,181. This expense only represents strike benefits distributed to strikers and persons involved, together with the expenses of committees and arbitrators who conducted and settled the disputes. The total nubmer of persons involved in these strikes during 1899 and 1900 were 274,260, and the total number benefited were 285,932.

An exhaustive inquiry was also made as to the position these organizations took on the question or arbitration as a method of preventing strikes.

Compulsory arbitration is unanimously opposed.

Arbitration by outside parties who are not directly interested in the controversy, and who may be specially selected by the disputants, is generally regarded with favor, but only as a last resort.

Many organizations have adopted an elaborate conciliatory system, whereby the employers and employed directly interested shall settle their own differences, with provisions made to permit assistance being given by both the national representatives of the employers and of the trades organizations. This system is very successful as a rule, and meets with increasing favor.

Some other organizations, the most notable being the bituminous coal miners, prefer the conference system, whereby representative employers and employees meet annually or at such times as may be previously arranged. At these conferences every point of detail is brought up for consideration, and a conclusion reached by a unanimous vote of the whole conference on all matters, before adjournment. This method is highly regarded both by miners and operators, and from the record made during the last three years, the system bids fair to become permanent.

Another system to avoid strikes which is growing in popular favor is the stamping or labelling the products of labor as "union made." Thirty-one organizations now have labels. The following table shows craft organizatoin, date of establishing label, and the number issued:

Craft.	Date.	Label was established.	Numbers issued.
Bakers	1887	For 1900 only	82,483,000
Boot and shoe workers	1896	A stamp only; many millions used	
Brewery workmen	1894	For 1900 only	13,000,000
Cigar-makers (Blue Label)	1880	For 1899 and 1900 only	41,024,500
Carriage workers	1894		12,000
Coopers	1896	No record	
Engravers (watch)	1900	Eight months only	200,000
Hatters	1885		58,000,000
Leather workers	1897	No record	
Metal polishers	1897	For 1900 only	500,000
Printers, pressmen, etc	1891	Many m llion impressions	
Tailors	1892	For 1900 only	1,500,000
Tobacco workers	1895	Total to date	431,260,033
Trunk and bag workers	1899		20,000
Wood workers	1897	Stamped on p oduct	No record of quantity.

The remainder are of recent date and have not been reported.

Table showing shorter work day secured by Labor Organizations in the United States and Canada.

Name of organization.	Date of organization.	Present membership.	Number of strikes during 1899 and 1900.				Total cost of strikes to union treasuries during 1899-1900.	Number of persons		Maximum working hours per day.			
			Won.	Compromised.	Lost.	Total.		Involved in strikes.	Benefited by strikes.	Previous to organization.	Since organization.	Date when hours were reduced.	Number members working eight hours.
							$						
Allied Metal Mechanics, Int. Ass'n. of	1897	2,200	.....	.....	.....	.....	.....	.....	.....	10	9-10	1899	None
Bakers and Confectioners, Int. Jour. of	1886	9,000	4	.....	..	4	1,913	365	365	16	10½-11	1899	None
Barbers, Int. Union of Journeymen	1896	6,900	1	.....	.....	1	175	35	35	12-16	10-12	.....	None
Blacksmith's, Int. Brotherhood of	1890	10,000	2	1	.....	3	.....	300	300	10	8-9-10	1899	1,500
Boilermakers and Iron Ship Builders, Bro. of	1881	5,100	59	6	5	70	18,027	4,127	6,948	10	8-9-10	1899	500
Bookbinders, Int. Brotherhood of	1892	7,000	3	.....	2	5	2,769	592	555	10	9	1899	.....
Boot and Shoe worker's Union	1895	13,500	7	5	1	13	.....	750	750	10	10	....	None
Brewery Workers, Int. Union of United	1886	22,500	21	.....	1	22	1,500	.....	.....	14-18	8-9-10	1887	11,000
Brickmakers' National Alliance	1894	3,000	6	2	2	10	5,500	1,075	550	10	8	1896	3,000
Bricklayers' and Masons' Int. Union	1865	45,000	...	.....	.....	11	.....	.....	.....	10-12	8-9	1878	32,000
Broommakers, International	1897	1,000	9	1	1	...	1,000	320	280	10	*8-9-10	1899	200
Carpenters and Joiners U. Bro. of	1881	70,000	198	10	6	214	.....	.....	.....	10	8-9	1881	45,000
Carpenters and Joiners, Amalgamated Soc	1860	3,000	10	1	1	12	30,000	.....	.....	10	8-9	1881	2,500
Carriage and Wagonmakers, International	1891	2,000	3	.....	1	4	2,800	320	320	10	8-9	1899	250
Carvers' Ass'n. of North America, Wood	1898	2,000	10	3	2	15	1,020	150	125	10	9	1899	.....
Chairmakers, National, of U. S. of A	1900	400	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cigarmakers' Int. Union of America	1864	35,000	149	38	27	214	97,332	9,547	21,817	12-15	8	1886	35,000
Clerks Int. Protective Ass'n., Retail	1890	30,000	...	.....	.....	.....	.....	.....	.....	14	10	.....	None
Coopers' Int. Union of North America	1890	4,500	35	6	11	52	4,250	911	775	13	8-9-10	1892	500
Conductors, Order of Railway	1868	28,280	..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Coremakers' International Union	1898	4,000	....	..	...	.....	.....	.....	.....	.....	.....	.....	.....
Curtain Operatives of America, Amalgamated Lace	1898	1,000	1	.....	.....	1	8,950	100	100	10	9-10	1899	.....
Drivers, International Union Team	1898	5,000	19	4	3	26	.....	330	250	10	10	.....	.....
Electrical Workers of America, Nat. Brotherhood of	1891	8,000	8	.....	4	12	10,000	3,000	2,000	10	8-9	1892	4,000
Engineers, Brotherhood of Locomotive	1863	35,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Engineers, National Bro. Coal Hoisting	1896	950	1	.....	1	2	None	600	300	12-14	8-12	1899	350
Engineers, Int. Union of Steam (Stationary)	1896	7,500	5	5	.....	10	.....	.....	.....	12	8-10	1897	2,000
Engineers, Amal Soc. of (Machinists, etc)	1851	2,500	.....	.....	.....	.....	.....	.....	.....	10	8-9-10	1899	400
Engravers, Int. Association of Watch Case	1900	500	4	.....	1	5	22,000	300	250	10	10	.....	None
Firemen, Brotherhood of Locomotive	1875	36,600	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Firemen, Int Brotherhood of Stationary	1898	2,600	5	3	2	10	1,500	329	265	12-14	8-12	1898	1,000
Fitters and Helpers, National Ass'n. of Steam	1888	2,000	4	1	3	8	18,000	900	900	10	8-9	1890	1,500
Garment Workers of America, United	1891	22,000	1	3	1	5	625	.....	.....	† 12	9-10	1897	1,000
Garment Workers Union, International Ladies'	1900	2,000	14	2	2	18	6,500	2,000	1,800	15	9-10	1900	None
Glass Bottle Blowers' Association of U. S. and Can.	1847	4,000	15	3	.....	18	335,000	1,300	1,300	10	8-8½	1884	3,000
Glass Cutters' League of America, Window	1895	900	.....	.....	.....	.....	.....	.....	.....	10	8	1898	900
Glass Flatteners' Ass'n. of N. A., Window	.....	500	1	....	.....	1	.....	77	500	10	8	1898	500

Table showing shorter work day secured by Labor Organizations in the United States and Canada.—*Concluded.*

Name of Organization.	Date of organization.	Present membership.	Number of strikes during 1899 and 1900.				Total cost of strikes to union treasuries during 1899-1900.	Number of persons		Maximum working hours per day.			
			Won.	Compromised.	Lost.	Total.		Involved in strikes.	Benefitted by strikes.	Previous to organization.	Since organization.	Date when hours were reduced.	Number members working eight hours.
							$						
Glass Workers' Union, American Flint	1878	9,000	.....	.....	.....	.....	.....	.....	.....	10	7-8-9	1880	7,500
Glass Workers' National Union	1900	500	.....	1	.....	1	400	175	100	10	10	.....	None
Granite Cutters' National Union	1877	12,000	1	.....	.....	1	115,000	4,500	8,000	10	8	1899-1900	12,000
Grinders' National Union, Table Knives	1900	600	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hatters of North America, United	1896	7,500	1	1	.....	2	25,000	7,500	7,500	10	9	1898	None
Horseshoers of U. S. and Can., Int. Union of	1874	4,600	31	.....	.....	31	11,200	1,800	1,800	10 13	9	1878	.....
Hotel and Restaurant Employes, Int. L. of	1890	10,100	14	.....	.....	14	2.000	991	2,000	14-16	10-11	.....	None
Iron, Steel and Tin Workers, Amal. Ass,n. of	.....	8,500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jewelry Workers Union of America, Int	1899	1,200	1	.....	1	2	3.000	1,000	800	10	9½	1899	.....
Knights of Labor	1873	120,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Labor Unions, Federal (A. F. of L.)	1881	235,000	46	25	12	83	.....	6,922	5,896	10-12	8-9-10	1884	100,000
Lathers, Int. Union of Wood and Metal	1899	1,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laundry Workers, Int. Union of	1900	5,000	.....	.....	.....	.....	.....	.....	.....	10	10	.....	None
Laborers, Int. Protective Union of Building	1900	10,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leather Workers on Horse Goods, U. B. of	1896	3,700	12	.....	.....	12	7,025	520	520	10	8-10	.....	400
Longshoremen's Association, Int	1892	20,000	12	3	7	22	2,500	4,500	2,700	10-18	9-12	.....	None
Machinists, Int. Ass'n. of	1888	45,000	53	13	7	71	60,300	14,500	25,000	10	8-9-10	1899	10,000
Meat Cutters and Butcher Workmen of N. A	1897	8,320	.....	.....	.....	2	12,000	1,400	.....	16-18	9-10	.....	None
Metal Polishers and Brass Workers Union of N. A.	1896	19,000	8	1	1	10	46,000	4,120	12,860	10-11	9	1900	None
Metal Workers Int. Ass'n., An al. Sheet	1898	3,500	1	.....	.....	1	.....	.....	.....	10	9	1899	.....
Metal Workers Int. Union, United	1899	1,500	.....	.....	.....	.....	.....	.....	.....	10	8-9	1892	1,000
Mine Workers of America, United (Coal)	1890	275,000	1	1	2	4	154,677	157.000	147,000	10-15	8	1898	275,000
Mine Workers, Progressive Union of (Iron)	1897	4,500	.....	.....	5	5	.....	4,500	.....	.....	.....	.....	.....
Miners, Western Fed. of (Gold, Silver, Copper)	1893	40,000	.....	.....	.....	.....	.....	.....	.....	10	8-9-10	1896-1900	28,000
Molders' Union of North America, Iron	1859	20,000	19	3	20	42	112,270	2,639	1,111	10	10	.....	600
Musicians Am. Fed. of	.....	6,500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oil and Gas Well Workers, Int. Bro. of	1899	500	.....	.....	.....	.....	.....	.....	.....	12	8-12	1899	100
Painters, Dec. and Paperhangers, Am. Bro. of	1897	32,000	24	5	5	34	11,000	12,500	12,500	10	8 9	1890	28,000
Papermakers of Am, United Bro. of	1899	1,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Patternmakers' League of North Am.	1887	2,400	3	.....	1	4	3,420	460	1,000	10	8 9 10	1899	250
Plasterer's Int. Ass'n. of Operatives	1882	7,120	88	.....	2	90	3,500	3,980	3,950	10	8-9-10	1883	6,000
Plate Printers' Union of America	1893	1,000	1	.....	.....	1	.....	25	100	8	8	1868	1,000
Plumbers, Gas and Steamfitters, Un. Ass'n.	1889	15,000	.....	.....	.....	.....	.....	.....	.....	10	8	1886	15,000
Potters, National Bro. of Operative	1898	2,500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Printing Pressmen's Union, International	1889	10,000	15	5	.....	20	.....	.....	.....	10	8	1899	.....
Railway Clerks of America, Order of	1898	9,000	.....	.....	.....	.....	.....	.....	.....	10-12	10 12	.....	None
Railway Employes of America, Amal. Street	1895	4,500	6	1	3	10	.....	2,000	.....	12-18	10 12	.....	.....

Railroad Telegraphers, Order of	1886	15,000			1	1					12-18	11		None
Railway Trackmen, Brotherhood of	1899	4,500									10	10		None
Railroad Trainmen, Brotherhood of	1883	45,000												None
Seamen's Union, Int	1892	9,515									12	12		None
Spinners' Association, Cotton	1858	2,850	1	1		2	None	35	35		11	10		None
Stage Employes, National Alliance of	1892	3,800	11	3		14	14,000	1,300	1,200					
Switchmen's Union of North America		5,000												
Stove Mounters' Int. Union	1898	1,400	4	1	1	6	250	250	230		10	10		
Tailors' Union of America, Journeymen	1883	9,000	32	4	6	42	29,418	6,010	5,000		12	10		None
Tile Layers' Union, Int. Mosaic	1897	800	2		2	4		33	33		10	8	1897	800
Textile Workers of America, Int. Union of	1896	4,000	2		2	4		2,705	1,265		10	10		None
Tinplate Workers' Int. Protective Union	1899	2,500									12	8-10	1899	500
Tobacco Workers' Int. Union	1895	7,000	1				6,000	100	100		10	8-9-10	1896	1,400
Trunk and Bag Workers' Int. Union	1895	320	1	1		2	550	70	60		10	10		None
Typographical Union, Int	1854	32,900	11	10	15	36	92,504				10-12	8-9	1899	10,000
Threshermen's Protective Association of America														
Upholsterers' Int Union of North America	1899	1,800	8	4	2	14	3,000	300	200		10	10		
Weavers, Amal. Ass'n. of Elastic Web	1886	355	1			1	400	4	4		10	9	1887	None
Weavers' Protective Ass'n., American Wire	1890	235	1			1	4,000	12	12		10	8	1890	235
Wood Workers' Int. Union of Am., Amal	1873	17,500	64	2	5	71	4,906	4,931	4,431		12	8-9-10	1899	8,000
Totals		1,550,245	1,071	179	177	1,427	1,293,181	274,260	285,932		11.5	9.7		531,085

ADVANTAGES GAINED BY ORGANIZATIONS WITHOUT STRIKES DURING 1899 AND 1900.

Bakers—Gained ten per cent. increased wages; secured a reduction in hours of one per day, affecting 500 people; obtained recognition of the union generally.

Barbers—General improvement in working conditions. Some localities have reduced hours from thirteen and over to eleven per day, the majority have reduced the hours to an average of twelve per day; have advanced the rate of wages in many places twenty per cent.

Blacksmiths—Gains in wages and reductions in hours have been secured in a majority of cases with the blacksmiths by conciliatory means.

Boilermakers—In seven cities gained one hour less per day with ten per cent. increased wages; in one city twenty per cent. increased pay; in one city secured the eight hour day without reduction in pay.

Bookbinders—Gained in wages an average of twenty per cent.; in some cases as high as $6.00 per week; reduced hours from ten to nine per day generally.

Boot and Shoe Workers—Secured increase of two dollars and a half and three dollars per week in wages in several cities; better prices and working conditions gained by conciliatory means and the union stamp.

Brewery Workers—General improvement in working conditions, more considerate treatment by bosses; increased wages and reduction of working hours secured in many places by conciliation.

Broom-Makers—200 members secured fifteen per cent. increase of wages, and one shop the eight-hour day.

Carpenters—As organization develops the eight-hour day follows, which we usually gain without striking; have also secured the Saturday half-holiday and two and one-half cents per hour increased pay.

Carriage Workers—Fifty members secured a reduction of working hours without re-

Carvers—Two hundred members got twenty-five cents a day increase of wages; two hundred secured the eight-hour day without decreased pay; generally we were driven to strike before we could make ourselves understood that we were in earnest.

Cigar Makers—Had a great many strikes, but the majority of difficulties settled without strikes; eight-hour day prevailed; greater demand for blue label goods than ever.

Clerks—Continue to gain reductions in working hours and receive the blessing of Sunday observance, which was absolutely impossible without organization; better working conditions granted, which have an important bearing on our health and comfort.

Coopers—Increased wages and reduced hours have been secured in many places without strikes.

Curtain Operatives—Gained reduction of working hours; better factory conditions; fifteen per cent. increase of wages.

Team Drivers—better working conditions for man and beast, but we are frequently driven to strike or threaten a strike before it is obtained.

Engineers (Coal Hoisting)—Twenty per cent. increase of wages and a reduction of four hours per day for 500 men: the blessing of Sunday observance is afforded us too in many instances.

Engineers (Locomotive)—Close organization, careful preparation of grievances, determined efforts, everlasting vigilance for our rights have made strikes almost unnecessary.

Firemen (Locomotive)—Advantages too numerous to specify; we avoid strikes by organizing more solidly.

Garment Workers (Ladies' Apparel)—Eighteen shops unionized without strikes, gaining twenty-five to thirty per cent. increase of wages.

Garment Workers (Men's Apparel)—Eighteen shops unionized without strikes, which meant higher wages and reduced hours in every instance.

Glass Bottle Blowers—Few advantages gained, without strikes.

Granite Cutters—Advantages gained without strikes are not many, but by these means we have gained recognition of our union in every locality where we are organized, and we have also secured the adoption of official agreements.

Hatters—Many advantages gained without strikes, largely influenced by the patronage given our union label.

Hotel Employes (Waiters, Etc.)—Many advantages secured, chief of which are better conditions, sanitary and otherwise, making the employment more endurable.

Lathers—Every local made demands for more wages and less hours; nearly all won without any strikes of importance.

Leather Workers—Continual gains of increased wages and reduced hours without strikes.

Machinists—One hundred and twenty disputes settled without the loss of a day, which secured advantages of recognition, more pay, less hours, and other important shop regulations.

Meat Cutters (Butcher Workmen)—Better wages, shorter hours, pay for overtime, and better working conditions have been secured in numerous instances.

Metal Polishers—3,500 members secured an increase in wages of twenty-five cents per day; better working conditions were secured in every case where complaints were made.

Mine Workers (Coal)—A general increase of twenty per cent. in wages was secured by means of joint conferences with employers of bituminous coal miners, in Pennsylvania, Ohio, Indiana, Illinois, and Iowa. $20,000,000 is a fair average of the total amount of increased wages secured for the bituminous miners during the past year without strikes.

Miners (Gold, Silver and Copper)—Legislative means are employed to secure better terms and conditions, this method is found far more efficient than striking.

Molders—Yearly agreements, defining minimum rates of wages, maximum hours, improved shop facilities, and conditions less irksome to the molders, is a small part of the advantages obtained without strife.

Oil and Gas Well Workers—Gained fifty cents a day of twelve hours, and labor day as a holiday and other minor concessions.

Painters—As our organization grows and the employers' patience expands, we find strikes become less necessary, although they have been frequent in the past, many concessions were obtained during the past two yars.

Pattern Makers—Many strikes of a minor character took place in order to test the challenge "That pattern makers would not strike anyhow." Serious disputes have not been necessary; reasonable concessions have been secured easily by conferences.

Telegraphers (Railroad)—Made enormous gains in the wages of members; hours should be reduced; have not materially shortened them yet, but have taken extra work off telegraphers which properly belonged to other labor; many disputes successfully adjusted.

Trackmen (Railway)—$200,000 a year has been secured for the trackmen on five large railroad systems in the shape of increased wages, in addition to a reduction of hours, and pay for overtime, which previously had not been granted.

Tailors—Tendency is upward for better shop conditions, better pay, and shorter hours; all the advantages which have been gained without strikes have not been reported to the general office. Bad news always travels faster and more directly than good news. Our records show that at least $25,000 more wages are being paid tailors annually this year than last, for the same class and quantity of work.

Tin Plate Workers—Reduced the hours of labor from twelve to ten per day.

Tobacco Workers—As the demand for goods with our Union Label increases the necessity for our organization striking, proportionately decreases; as a consequence wages are increased and hours reduced, with the assurance that shop conditions are healthy and comfortable.

Trunk and Bag Workers—A few improvements in our general condition without striking have been conceded ,which have been gratefully appreciated.

Free Employment Offices

Pursuant to the spirit of clause 3 of the Act creating the Bureau of Labor, as I interpret it, and which reads as follows: "It shall be the object of the Bureau to collect, assort and systematize and publish information and statistics relating to employment, wages and hours of labor throughout the Province, co-operation, strikes, or other labor difficulties, trades unions, labor organizations ,the relations between labor and capital, and other subjects of interest to workingmen, with such information relating to the commercial, industrial, and sanitary condition of workingmen, and the permanent prosperity of the industries of the Province, as the Bureau may be able to gather." I beg to direct attention to a few facts gathered, relative to what are generally known as employment offices, with a view of pointing out what action has been taken by other legislative bodies in connection therewith. For while it is not the purpose of the Bureau of Labor to advise or suggest legislation concerning any subject, yet it would appear to be the duty of the Bureau to point out any seeming injustice to the workingmen and women that may come under its notice, and which may serve as a guide to legislation.

Situated in most cities are what are known as employment or intelligence offices, whose business consists in undertaking to find situations for those seeking them, in all branches of work, for a monetary consideration, and whose operations may be regarded as of private profit, rather than for public benefit. Doubtless many engaged in this business are men of integrity and honesty, and who conduct their business on sound principles, following closely the rules of honest business methods. On the other hand, evidence is abundant that with many engaged in the business of Employment or Intelligence Offices, the contrary of fair dealing is the fact. Speaking of these agencies, the fifteenth annual report of the Bureau of Labour Statistics for Connecticut says: "Their managers are engaged in grasping the hard-earned money of the poor by charging fees for the supposed service of securing employment for the applicants. These private agencies charge men and women from one dollar upwards for securing them employment, and in some cases they demand and receive a price for accepting an application whether they secure a place or not. This every citizen knows to be wrong, because it is evident that when men and women are willing to labor, but are unable to find work, it is burdensome enough for them to suffer the hardships which are inseparable from enforced idleness, without being taxed for the privilege of securing work or for some one's promise to secure work for them."

Much interest in this subject has long been manifested by the workers in Canada, through their various organized channels, such as the Dominion Trades and Labour Congress, also the various Trades and Labour Councils of the different cities, and also among other elements of the community has attention been drawn to the abuses of this system, so much so that as Secretary of the Bureau of Labour I have felt it incumbent upon me to gather together such facts in connection therewith as will give a fairly intelligent idea of the situation with a view of directing such attention thereto, as will ensure the due consideration of this subject. The Connecticut report, before referred to, in its excellent treatise on this subject, says:

"It is doubtless true that the destitute unemployed in large cities constituted for the time a dependent class as helpless as, and more dangerous to the body politic, than those unfortunates who are abundantly provided for by public charities. Present conditions develop a class who prey upon these needy people in their want, and thus aggravate not only the individual desperation, but the social disease which it begets. It is easily in the power of the State to anticipate and alleviate to a great extent this evil."

With the development of industrial interests has arisen the necessity for employment agencies. The practices of unscrupulous men, ever ready to take advantage of the necessities of the unemployed have directed public attention to this question. The result has been that free offices under the management of the State have been

opened in many of the United States, the Australian Colonies, and parts of Europe, together with many bureaus in most countries under religious and philanthropic auspices, the experiences of which removes from these undertakings all the uncertainty of experiment. Fortunately the recent substantial improvement in the industrial conditions of the country has somewhat reduced the necessity for such agencies so far as those seeking for labor are concerned. The growing wants of those who employ labor and appreciate its increasing scarcity, however, should not be forgotten. The benefits which would accrue from the establishment of free employment agencies would be of nearly as great value to them as to the unemployed. Very little is generally known either concerning the hardships which the private agencies impose upon multitudes of worthy and willing poor, or, on the other hand, concerning the efforts which have been made through the Governmental and other agencies in this and other countries to deliver the working people from this form of oppression. On account of the varied need of help in the widely diversified industries of this State, and because of the great army of skilled and unskilled labourers who seek employment therein, our Province furnishes a wide field for the permanent establishment of free employment offices, for the gratuitous guidance and assistance of those whose uninterrupted employment is so closely allied to and which vitally affects the public welfare. The work could be undertaken by the Labour Bureau with but small cost to the Province.

Hon. David Ross, Secretary of the Illinois Board of Labour Statistics, in the course of an address delivered at the opening of the free employment offices in the city of Chicago, said; "As showing the extent of the field for such legislative effort in our own bodies, it is shown that in the city of Boston, with less than half the population of Chicago, 119 private employment agencies received over 600,000 applications for work during one year, also that in St. Louis, six private agencies received over 100,000 applications in the same period, and that in Kansas City 88,000 applications were made in a year to 12 private agencies; moreover, that all these figures are notorious understatements, having been obtained from the private agents themselves, all whose interests lie in minimizing the real number. But, assuming the substantial completeness of the figures given for the City of Boston, which are doubtless the most trustworthy we have, and applying them to the 196 private agencies which where licensed in the city of Chicago in 1896, we are confronted with the startilng probability that during periods of depression approximately 1,000,000 applications for work must be made in the course of a year to the tribute-gathering offices in this city.

Employment Agencies in Europe.

As an evidence of the efficiency of the free service rendered at public cost by the various home and foreign Governments we find that partial returns from the various municipal offices in the city of Paris show that in the year 1897 employment was secured without cost to the applicant for 47,979 persons, and that in the first ten months of 1898 work was found for 26,270 others, and this notwithstanding the fact that free agencies are also maintained in that city by 421 different trade unions, by seventy-six convents, and by fifty-nine friendly societies.

The five so-called "Labour Bureaus" in London and five in other cities in England, together with the agencies of the Salvation Army and of the Association for Befriending Young Servants, secured situations free of charge in 1898 for 14,994 persons out of 16,382, who made applications; in addition to these, fifteen temporary registries were established for various periods, and special permanent offices have long been maintained in London for securing without charge employment for seamen, for discharged soldiers, for reserved corps soldiers, for army and navy pensioners, and for discharged prisoners.

The free employment agencies in Germany secured during the year ending July 1898, occupations for 222,595 idle persons out of 387,991 who sought occupation. These are the submerged, the helpless, the hopeless, a constant menace to society—for

whom there is no relief except in such State help as will enable them to recover their footing and again become self-helping contributors to the common weal.

England, France, Germany, Bavaria, New Zealand, Australia, and even Russia, representatives alike of the oldest and of the youngest civilizations, as well as numerous cities on this continent, have all reached the common conviction by a common experience that the needs of the unemployed are of legitimate concern to the State.

Ohio was the first State to create public employment offices, having established them in 1890. The Commissioner, in a recent report, speaking of these offices said: "The Municipal Labour Congress of Cincinnati, an organization composed of all trades and labour unions in that city, started the agitation in favour of something of this kind in all the large cities of the State. The law creating them was undoubetdly an experimental departure in legislation. The result of that Act has been a success. I am glad to say that these offices stand well in favor with employers of labor, and workingmen and women consider it a great privilege to have a place of this kind in their city where they can go for information or to secure employment, without being charged a fee or being imposed upon in any way. If the kind of work they desire can be had, they get it freely. The army of idle men seeking situations has been alarmingly great in cities at times, and few of our people are cognizant of the expense to which the laboring people are often subject to in seeking employment through private intelligence offices.

Before the inauguration of the free public employment offices by the State these pay offices were springing up on every corner, and were getting fat by their methods of doing business. There are now but a few of them left, and where they still exist, they are not working in that high-handed manner as was the case a few years ago.

From the reports of the Bureau of Statistics of Connecticut for 1899 and 1900, which presents an exhaustive examination into this question, this Bureau is enabled to give data of the Ohio offices, located in Cincinnati, Cleveland, Toledo, Columbus, and Dayton up to 1899, the ten years of its existence, and from the last report of Ohio for 1900. The complete totals for Ohio is here presented from their inception in 1890 up to December 31st, 1900:

OHIO GRAND TOTALS 1890 1900 (INCLUSIVE).

Location	Males.			Females.		
	Situations wanted.	Help wanted.	Positions secured.	Situations wanted.	Help wanted.	Positions secured.
Cincinnati	30,314	12,478	9,383	25,351	22,229	14,192
Cleveland....	33,487	10,804	7,841	32,601	31,398	23,972
Columbus	32,175	12,707	8,814	18,686	25,988	18,218
Toledo	29,356	15,709	12,181	23,981	33,463	23,725
Dayton	35,514	14,639	11,085	32,300	31,209	21,503
Totals	160,846	66,337	49,304	132,919	144,287	100,710

In 1890 5,575 men and 3,413 women had positions secured for them. In 1891 employment was secured for 6,967 men and 8,628 women; in 1892 for 5,985 men and 7,860 women; in 1893, for 4,566 men and 8,635 women; in 1894, for 2,140 men and 7,626 women; in 1895, for 2,677 men and 9,048 women; in 1896, for 2,781 men and 10,164 women; in 1897, for 3,912 men and 13,135 women; in 1898, for 4,029 men and 13,666 women; in 1899, for 6,058 men and 9,931 women; and in 1900, for 4,714 men and 8,630 women.

By referring to the table of grand totals it will be seen that out of 160,846 men who aplied for employment in Ohio during the eleven years 49,304 were secured positions; also that out of 132,919 women who applied 100,710 were given employment. Out of this total application for employment of 293,765 persons there were secured situations for 150,014, in other words, over 50 per cent. of the applicants for situations were secured positions, and absolutely free. Well may the Commissioner of Labor of Ohio describe five public employment offices in the State "a success," and "as fully justi-

fying the wisdom of the legislators who enacted the law."

The Superintendent of the Cleveland office in his report to the Commissioner for 1900 says: "The free public employment office has passed the experimental stage, and is to-day considered one of the most beneficent of the State institutions. Through it the unemployed are very largely able to obtain positions or labor to perform, while the employers of labor are able to find such help as they desire without expense to themselves or to those whom they employ. The good work accomplished by this office is, to a great extent due to the support of the labor unions of the city and of the working people in general. If the workings of the office were as well known to the employing public as it is to the laboring class the results would be double what our report shows. As it is now, those needing help are only about 70 per cent. of the applications made to the office for work."

Further on he says: "The private employment agencies are the greatest enemy of the unemployed. They are conducted by unscrupulous robbers,, and the shekels they gather in during the year are enormous. When we take into account that the men and women they rob are of that class who can least afford it.

What is true of Cleveland is also true of all other cities, as borne out by the facts presented in other reports from places where such free public employment offices have been established.

"ASSISTANCE TO FARMERS."

With a view of ascertaining to what extent the bureaus assist the farmer in securing help in season of need, the commissioners of the various States were communicated with, soliciting information on this question.

Hon. David Ross, Secretary of the Bureau of Labor Statistics for Illinois, replies under date of October 26, 1901: "I am in receipt of your favor of the 17th instant, and, answering your enquiry as to the advantages of free employment offices to farming communities, respectfully report that since the opening of our employment agencies in Chicago, the records show that 1,671 farm hands have secured employment. This is the result of practically two years work. The agencies report that nearly every application for farm labor is supplied. This is true of our offices located in the city of Chicago, as it is in the city of Peoria. Wishing you success in this most commendable work, etc.

Hon. William Anderson, Commissioner for Missouri, writes:

"During the very busy season in harvest times, when they are sadly in need of help, the free employment office would be an aid to the farmer in securing help. We find this to be true to a very large extent in the State of Missouri. During the dull seasons the farmers' sons apply to our free employment offices frequently to go on railroads, construction works of various kinds, and remain until the farmers' busy season opens, when they go to work on the farms, and during the harvest season we have frequently sent out as many as 2,000 during a month into the harvest fields of Kansas."

Hon. Henry E. Back, Commissioner of Connecticut, writes under date of October 30, 1901: "I send herewith letters, received from each of the superintendents of the five free public employment bureaus in Connecticut. You will observe that in the three months, from July 1 to October 1, 1901, help had been furnished at the Hartford office to 189 farmers. At the Waterbury office to 26 farmers, at the Bridgeport office to 68 farmers, at the New Haven office to 22 farmers, at the Norwich office to 10 farmers, making 315 farmers supplied with laborers in the little State of Connecticut in about three months, July, August, and September. This is at the rate of over 1,200 farmers furnished with help without expense or trouble per year in this small commonwealth, and with the free offices in only four of the eight counties. It also should be observed that small Connecticut is not essentially or principally an agricultural State, it is chiefly a manufacturing State.

The following review of the free employment offices, from the Niuth Biennial Iowa Report for 1899-1900, prepared by Miss Kate B. Mills of Chicago University, show some very interesting comparisons.

Ohio: Estimated amount which would have been paid to agencies by applicants during annual period, $20,123; deduct cost of maintenance of "free office," $5,000. A net saving to the working people of the State, $15,132.

The above estimate is based on the fee of $1, and is believed to be below the real cost. In this connection it is proper to show that the State of Washington reports an average cost of each position secured by the State employment office at Seattle: 1894, 22.93 cents; 1895, 19.38 cents; 1896, 21.38 cents; 1897, 6.24 cents; 1898, 5.64 cents; 1899, 4.98 cents.

One particular divergence between Ohio and Illinois is noticed: Ohio compels the cities themselves who by the operations of the law have free employment bureaus to pay for their maintenance, whereas in Illinois their maintenance is paid for by the State, and there the service is materially helped, and its efficiency increased by the co-operation of the factory inspectors, who can be made doubly useful by obtaining and furnishing information both as to help and employment wanted, a plan that could be alvantageously adopted in our State.

Free employment bureaus, as conducted in many of our sister States, are not an experiment any longer; they have proven their right to exist at the State's expense, and I believe I voice the opinion of not only the labor organizations, but the general opinion of the wage-earners of the State, in advocating the establishment of free employment offices under the supervision of the labor commissioner, either on the Ohio or Illinois plan.

This beneficent arrangement would prevent congestion of laborers in certain localities and do away with the scarcity in others. Farmers could in time of pressing work, such as harvest time, have access to this clearing-house, and idle men easily find employment.

The reasons for the establishment of free employment bureaus are so obvious that as the urban population (which is now 43 per cent. of the whole) increases their establishment will become an imperative necessity.

The free employment office is a product of Europe, France being the first nation to put the plan into operation. From Paris the movement spread all over Europe, extending into Germany, England, Russia, and Bavaria, and reaching New Zealand and Australia.

The plan was brought to America by an official of Ohio, who, after an investigation of the Paris office, recommended the establishment of a free employment office in Ohio. By act of the general assembly, passed April 28, 1890, a law was enacted by which offices were established in the five largest cities in Ohio, viz., Cincinnati, Cleveland, Columbus, Dayton and Toledo. I have appended a copy of the Ohio law (pages 16 and 17). It is unnecessary for the purpose of this paper to go into the details of the annual reports of these various offices. I desire to make an historical statement of the movement in this country rather than an argument for or against it. Some figures, however, are necessary and interesting to show the scope and growth of the work.

The report of the Ohio Bureau of Labor statistics for the year 1890 gives the work of the different offices since their establishment. The first office was opened in Toledo, June 26, 1890, the last in Columbus on September 2nd. The report for 1890 includes the work of these offices from June 26 to October 1. During this short period there were 20,136 applications for positions, 18,154 aplications for help, and 8,988 situations were secured for the applicants. It is in the relation of these figures to each other that I find the most significance. The number of situations secured was 44.6 per cent. of the situations wanted, and 29.5 per cent. of the help wanted; the help wanted was 90.2 per cent. of the situations wanted. These figures show that the employers and workmen were ready to seize the opportunities held out to them by the State and to free themselves from the exorbitant and often fraudulent charges of many of the private agencies.

Another interesting statement in this fourteenth annual report is the financial one:

Estimated amount which would have been paid to agencies by applicants during this period $20,132 00
Deduct cost of maintenance of offices 5,000 00
And there is shown a net saving of..... 15,132 00

to the working people of the State.

Of course the first figure of $20,132 is an estimated one, but the investigations made by different labor commissioners of the private agencies in their respective States show that a fee of $1.00 is not a high average for applicants to pay for registering for employment. In addition to this registry fee, the private agency demands a per cent. of the first wages.

A test year of such work as the free employment offices hoped to do 1893, a year of great business depression. In that year the figures are as follows: —

Total number of situations wanted.. 26,854
Total number of help wanted.. 17,229
Total number of situations secured.... 15,201

ing established in the City of Seattle in 1894. In that year 2,823 applicants secured were 76.62 per cent. of help wanted, and positions secured were 49.16 per cent. of the situations wanted.

This would seem to indicate great activity on the part of the offices and hearty support and appreciation by the employers. In 1891 45.2 per cent. of those applying for positions secured them. The figures of 1893 show an increase over these, but there is a slight decrease in the 1893 figures when compared with the year 1892. In that year 51.36 per cent. of applicants for positions receiving them. The World's Fair is held by many to be responsible for this decrease.

The latest obtainable report of this bureau, that of 1900, gives the following figures :—

Number of situations wanted.. 20,855
Number of help wanted.. 22,437
Number of situations secured.. 13,344

Help wanted was 93 per cent. of situations wanted. Positions secured were 59 per cent. of help wanted, and positions secured were 64 per cent. of situations wanted.

Thus it is seen that the "Ohio experiment" as it has been called, has demonstrated the advantages to that State of the public administration of a free labor employment office for the use of her unemployed workmen.

The first state to follow the example of Ohio was Washington, an office being established in the City of Seattle in 1894. In that year 2,823 applicants secured positions through the office; in 1897, 8,736; in 1898, 21,948; in 1899 there was a slight decrease, the number being 20,070. In Washington the office places large numbers of hop-pickers, but their season is so short, and their number so uncertain, a fact due to variability of the crop, that this class of workmen is not included in the figures given.

In the Washington report there is also the interesting financial statement showing the cost to the state of each position secured :—

1894 .. .. 22.93 cents.
1895.. ... ... 19.38 cents.
1896.. .... 21.38 cents.
1897..... .... 6.24 cents.
1898.. .... 5.64 cents.
1899.. .... 4.98 cents.

The commissioner for Washington says he has made special endeavor to be of service of the skilled workmen, and he has been gratified by the marked increase in skilled help he has supplied. He does not, however, give figures classifying the workmen according to their trades.

He has also made investigations as to the satisfaction given to the employers by the help furnished through his office as compared with that furnished by the pri-

vate agencies. The employers say the help furnished by the free employment office has been more satisfactory than that furnished by the private agencies.

While the work of the Seattle office is contained in the report of the Commissioner of Labor for Washington yet the conduct of the office is under the control of the city and is maintained by it.

From 1895 to 1897 the Commissioner of Labor of California maintained a free employment office without any special appropriation from the legislature, the funds being supplied by private subscription. At the end of that time the office was discontinued, the bill providing for such work failing to pass. In the Ninth Biennial Report of the Bureau of Labor Statistics of California, 1899-1900, the commissioner, after a review of the results of the agency in 1895-1897, and a statement of the advantages and disadvantages of state control, concludes his report on the subject by recommending, not the establishment of a state office, but a close supervision of private ones, and the enactment of certain laws in regard to fees, etc. He says further that not more than 10 per cent. of the wage earners of the state are patrons of the employment agencies.

In the same year that the commissioner of California was making his experiment, Montana established a free employment office. The law in Montana at first provided for the establishment of such offices by the state only. It was in 1897 modified to provide for their establishment by municipalities also, if desired. So far I have been unable to find that any have been so established. The defect of the Montana law, a defect which has prevented the successful operation of the offices, is that the free employment office is located in the office of the Commissioner of Labor in the state capital, a place not easily accessible to the unemployed; and, further, reports indicate that the demand for employment is not so great in Helena as it is in other cities in the state. These facts sufficiently account for the small returns from Montana office. Notwithstanding these unfortunate limitations the report for 1895, covering the work from April 1st to December 1st, shows that positions were secured to 46 per cent. of those applying for employment. In 1896, 62 per cent. of those applying were provided with work. I should infer from these figures that better location and better facilities would make the office of vast advantage to the workingmen of Montana.

In his report for 1896 the Commissioner of Maryland says he made the experiment without expense to the state. He does not give statistics, but states that about 12½ per cent. of the applicants were placed in positions of minor importance. He further states that he is convinced of the advisability of the establishment of a free employment office by the state.

The first work of this nature under sanction was in 1900, beginning August 21st. During the remaining months of the year there were 124 applicants, of whom forty-six were referred to employers. The Commissioner for that year urges the better equipment of the office by State appropriation.

In New York the free employment office was established by an act of the general assembly in 1896. A noticeable feature of the law of New York is the requirement that the Commissioner shall mail weekly to the supervisors of every county in the state a list of all applicants for labor or help. The Commissioners of other states lament their inability to make known to the people of their states the applications filed. The New York Commissioner, however, does not seem to think the method authorized by the state is the best one. He thinks newspaper advertising would bring better results.

An office was opened in New York City July 20th. During the five remaining months of 1896 there were 8,040 applications for labor and 948 applications for help. Four hundred and forty-four situations were secured for applicants.

Help wanted was 11 per cent. of the situations wanted ,and positions secured were 5 per cent. of the situations wanted.

In 1897 the law was repealed, and another substituted for it in which was omitted the requirement in regard to the weekly report to the county supervisors.

In the 1898 report it is shown that 39.6 per cent. of the persons applying for work in that year received it ,as against 20 per cent. in 1897. The figures are given in more detail for the work of the next two years in the reports. For 1899 they are as follows :—

Applicants for work	4,922
Applicants for help	2,982
Situations secured	2,292

For the year 1900 they are as follows :—

Applicants for work	5,633
Applicants for help	3,505
Situations secured	2,899

These figures show a marked increase over the previous year, the per cent. of increase in situations secured being 26.

The last available New York reports show that New York is the only city in which the free employment office has been established, although under the law there could be one in Buffalo. The appropriation for the New York office is but $5,000 a year.

In Nebraska a free employment office was opened May 1, 1897. No extra appropriation was made for two years. Owing to this lack of funds no branch offices could be established in the large cities of the State, the work being confined to that which could be transacted in the office of the Commissioner at the capital at Lincoln.

The feeling of the unemployed toward the office in Nebraska is clearly seen in the numbers of applicants who registered for work during the period from May 1, 1897, to December 31, 1899, that being the period covered by the Commissioner's first report. There were 1,040 applicants. While there were but 218 of these who received positions, this is quite a saving to the state, since there was no outlay.

Th Bureau of Labor in Nebraska makes biennial repors, hence the next report covers the work for the two years, 1899-1900. The figures are as follows:—

Applicants for positions	653
Applicants for help	15
Positions secured	181

Twenty-seven per cent. of those applying for work received it, as against 24 per cent. in the previous report.

In looking at these figures and comparing them with those of other states, the location of the office, and the fact that no appropriaion is made for it must be borne in mind.

In Missouri the State Bureau of Labor opened a free employment department in St. Louis the first Monday in October, 1897. No appropriation was made for this office by the State, all expense being paid out of the regular appropriation for the Bureau of Labor.

In the annual report for 1897 there is a statement of the work for the first month.

Applicants for positions	1,748
Applicants for help	787
Positions secured	506

The number of male applicants far exceeded the female, the former being 1,511, the latter but 237. The female help desired was about 50 per cent. of the male help, the figures being 266 against 521.

In 1898 the St. Louis office shows :—

Applicants for employment	4,849
Applicants for help	3,181
Situations secured	2,318

Nearly fifty per cent. of those applying received work

In but four classes of labor was the demand greater than the supply, viz., factory workers, housework, miners, salespeople and solicitors. There were 1,271 ap-

plicants for positions as office help, while there were but 156 applicants for such help. Boys seemed to be in demand. 140 of the 125 applicants receiving positions. It was the unskilled labor, the ordinary day laborer and the teamster, who applied in large numbers, and whose labor was not in demand, but about three per cent. of the applicants of this class receiving work.

In December, 1899, an office was established in Kansas City. The work of this office, from its opening to October 1, 1900, was much larger than that of the St. Louis office. The total figures for the two offices are as follows:—

Applicants for positions, St. Louis 4,222
Applicants for positions, Kansas City.. 7,311-11,533
Applicants for Help, St. Louis.. 2,281
Applicants for help, Kansas City.. 5,423-7,524
Positions secured. St. Louis.. 1,928
Positions secured. Kansas City.. 4,278-6,186

It will be seen from these figures that there was a decrease in the work of the St. Louis office. There is nothing to show whether or not any of the applications were diverted from the St. Louis office to Kansas City.

In this year over fifty per cent. of the applicants received positions, the gain being about one per cent. over the previous year.

The Missouri law provides for the establishment of the Free Public Employment Office in all cities of 100,000 inhabitants. The commissioner, in his last report, recommends appropriations for the establishment of an office in St. Joseph.

Next to New York the state in which there would seem to be the largest demand for the Free Employment Office is Illinois, the second city in the United States being in that state. But it is not until 1889 that the legislature of Illinois passed a law establishing the free employment office. A comparison of the Ohio law of 1890 and the Illinois law of 1899 will show progress of the feeling towards the "Ohio experiment." It is no longer an experiment, and the State, instead of shifting the burden of the maintenance of the offices upon the cities in which they are located, provides for them out of state funds. Enlisting the services of the different inspectors of the state to aid in the placing of labor is an advantageous feature of this law. Illinois seems to have done all in her power to bring the demand for labor and the labor supply together. The results may be seen from the reports. These reports give the work of the offices in much greater detail than do the reports from other states, and since in no city can labor conditions be studied with greater advantage than in Chicago I will give in some detail the work of the Chicago offices.

Under the law three offices were established in Chicago in 1899, one on the West Side, one on the North, and one on the South Side. The report for 1900 gives the statistics for that year as follows :—

Applicants for employment.. 37,285
Applications for help.. 39,866
Positions secured 35,542

87.73 per cent. of those applying received positions. Unskilled workmen form the larger class of applicants. There were but sixty-one professional men and women applying and but sixteen secured positions. One minister applied, and he was placed in some institution where he performed the duties of chaplain.

The statistics for the male department are as follows :—

Manual labor includes three classes of workmen, according to the report, and the statistics are as follows:—

Applicants for employment. 5,758
Applications for help.. 7,326
Positions secured 5,607

Trades, represented by eighty-two classes :—

Applications for positions 2,974
Applications for help 1,262
Positions secured 1,042

Agriculture represents five classes :—
Applicants for employment 962
Applications for help.. 1,008
Positions secured..... 919
Farm hands :—
Applications for positions.. 681
Applicants for help.. 757
Positions secured 675
Clerical, represented by seven classes :—
Applicants for positions.. 320
Applicants for help.. 43
Positions secured 309
Commercial, represented by twenty-two classes :—
Applicants for employment 1,922
Applicants for help.. 808
Positions secured 509
Domestic service, represented by twelve classes :—
Applicants for employment.. 4,192
Applicants for help.. 3,335
Positions secured 3,193
Transportation represented by seventeen classes:—
Applications for employment 2,232
Applications for help 1,579
Positions secured. 1,433
Miscellaneous, represented by twenty-eight classes, such as apprentices, barten-ders, boys (bell, errand. etc.), factory hands, janitors, watchmen, etc. :—
Applicants for employment.. 2,721
Applicants for help.. 1,370
Positions secured 1,277
Unclassified 1,287
The statistics for the female department as as follows:—
Unclassified.... 999
Clerical, represented by five classes :—
Applicants for employment.. 188
Applicants for help.. 62
Positions secured 59
Commercial, represented by nine classes :—
Applicants for employment 282
Applicants for help.. 137
Positions secured 106
Domestic service, represented by eighteen classes :—
Applicants for employment 14,388
Applicants for help.. 17,321
Positions secured.. 13,983
Personal service, represented by three classes :—
Applicants for employment 25
Applicants for help.. 1
Positions secured 1
Professional, represented by five classes :—
Applicants for employment 144
Applicants for help.. 210
Positions secured 116
Miscellaneous, represented by five classes :—
Applicants for employment.. 389
Applications for help 725
Positions secured 346

In the statistics for the male department the best showing is made in manual labor, 39.95 per cent. of those applying receiving work; in the statistics for the female department the domestic service has the best showing, 93.87 per cent. of those applying receiving work.

During the existence of the bureau, from its establishment August 2, 1899, to December 8, 1900, a period of seventy-one weeks, the statistics in general are as follows :—

	Men.	Women.	Total
Applicants for employment	34,491	22,454	56,945
Applicants for help..			61,622
Positions secured..	22,283	21,833	44,116

Seventy-seven per cent. of those applying for employment received it.

In July of the present year an office was opened in Peoria. The work of that office from July 1st to September 14th is as follows :—

Applicants for employment..	1,503
Applicants for help..	1,454
Positions secured..	993

Many commissioners are recommending to their legislatures the establishment of the free employment offices, feeling convinced after an examination of the working of the private agency that the state should come to the help of its unemployed in this way.

The feeling of the labor organizations toward the movement may be seen to some extent in a resolution which was read at the meeting of the Federation of Labor held at Louisville in December, 1900, from the Hotel and Restaurant Employees' International Alliance and Bartenders' International League of America condemning the private employment agencies and recommending that steps be taken to suppress them.

A communication from J. K. Vicha, Superintendent of the Cleveland, Ohio, Free Public Employment Office, was also read. This letter rehearses the evils of the private pay agency, and also the work done by the free offices in Ohio. He recommends that the Federation use all its influence toward the establishment of such agencies in other states.

Both these communications were referred to the committee on resolutions, which reported in favor of the free employment offices, and recommended their establishment and the suppression of the private agencies.

It is impossible, of course, to tell how many of the unemployed who seek the aid of the free employment office would go to the pay agency if the former were not in existence. Undoubtedly all would not do so, for there are many who do not have the fee demanded, and these are the very ones whom the state should help. When the conditions become such that the free employment office is no longer needed, as the commissioner of California says is the case in his state, then they may easily be discontinued, but in many states there is a large class of unemployed, and the most self-respecting way in which the state can care for them is to procure employment for them.

Statistical data of employment agencies in Ontario is not at present available. It is estimated that there are some twenty of these offices in the City of Toronto, with a proportionate number in the other cities of the Province, some of whom, it is alleged, are exploiting the necessities of those who can least afford it, namely, the unemployed. The evils surrounding the private agencies has long been a subject for consideration not only among the labor organizations, but other sections of the community. Some time ago a large and influential deputation, numbering many clergymen and others, petitioned the Toronto City Council with a view of mitigating the recognized evils existing from this source.

In a general way it is conceded that what is true of other localities, set forth in the foregoing, is also true of the cities of Ontario. A number of letters have been received by the Bureau bearing upon this subject.

RECENT LEGAL DECISIONS IN ONTARIO AFFECTING LABOR.

Case Under the Workmen's Compensation for Injuries Act.

A workman, while employed by contractors in the erection of a building, sustained injuries by falling a distance of 30 feet to the ground through the giving way of part of the scaffolding on which he was working. He claimed damages for negligence in the construction of the scaffolding. The scaffold on which he was standing consisted of a single plank, 16 feet long, one end of which rested on a trestle, and the other on a stay formed of a plank nailed to two upright posts forming part of the main building. The stay as originally fastened to the posts was perfectly secure, as the plank forming the stay was two inches thick and rested on its edge on a cleat securely fastened to the posts by spikes; the stay itself being securely fastened to the post by large spikes. The whole evidence showed that the stay while in that position was capable of sustaining a great weight. The general superintendent of the contractors' works was explicit in giving directions to the workmen, from time to time, that the stays should be put up and secured as these stays were. The day before the accident the stay in question was removed by two of the workmen, for their own convenience, while working a windlass, and raised about a foot above the cleats and nailed to the posts. This rendered the stay dangerous, because it was fastened at one end with two or three nails, and at the other end (upon which the plank forming the scaffold was placed) by only one nail. On the day of the accident the plaintiff (the carpenter) and a fellow-workman, were directed by the foreman on this work to cut off the ends of two beams at the top of the third story, and the plank referred to was thrown across from the trestle to the stay, a distance of 12 feet. The carpenter and his companion mounted this plank, which was over an open hatchway, when the stay gave way, and the carpenter fell down through the hatchway and so received the injuries for which the action was brought.

In answer to written questions put to them by the Judge, the jury found:—(1) That the defendant (the conractors' foreman) did not direct the two workmen to remove the stay; (2) that replacing the stay caused it to be defective; (3) that the defect was not discovered through the neglect of the contractors' foreman; (4) that the foreman placed the plank across the two beams to form the scaffold; (5) that the foreman, through his own negligence, was not aware that the stay was defective. The jury assessed the damages at $500.

The trial Judge reserved judgment on these answers, and subsequently dismissed the action with costs. He held that the jury having found that the foreman did not direct the two workmen to remove the stay, there was no evidence to support the finding of the jury that the defect was not discovered through the negligence of the foreman. The foreman, he said, had no reason to suppose that any change had been made in the stay. On returning with their answers the jury were asked by the Judge what was the negligence imputed to the foreman. They replied: "The plank would be higher at one end than the other, and he could easily see facing that." As to this the court makes the following comments: "The foreman, having a right to assume that the stay had not been tampered with by the workman, and that it was in the condition of security in which it had been placed under his directions, and when it was in the same condition up to three o'clock the previous day, there was nothing in the mere difference in the height of the two ends of the plank to indicate that there had been a change. The difference caused no comment on the part of the plaintiff, who was present and saw the plank placed in position, and who mounted on it to commence work. If it could be held that there was negligence on the part of the foreman upon the facts disclosed here, it would cast a responsibility on employers never contemplated by the Act." (1900) Ontario Reports, vol. 31, page 521.

Another Case Under the Workmen's Compensation for Injuries Act.

A conductor employed by an electric railway company brought an action to recover damages for injuries sustained by him by being thrown from a car while in the discharge of his duty as conductor. The accident was alleged to have been the result of negligence on the part of the motorman of the car. At the time of the accident the conductor was standing upon the lower and outer one of the two side steps of the car, having walked forward to take his fare from a passenger who had just got on the car. A waggon loaded with furniture was moving slowly ahead of the car in the same direction, and the motorman drove the car at a considerable rate of speed past the waggon as it was being turned out of the way. The conductor was struck by some of the furniture and was knocked off and severely injured. No part of the car was struck. The accident took place about eight o'clock on the evening of June 28, and it was proved that the motorman saw the waggon in plenty of time to have stopped the car if he had thought it necessary to do so. It was also proved that it was the conductor's duty to go to the passengers for their fares as they came on the car, and that he could not get to the passengers without using the side steps. The car was not crowded, and there were no passengers standing on the side steps. There was some evidence that the motorman sounded the gong as he approached the waggon, but the conductor said that he did not hear it.

In answer to questions put to them by the Judge, the jury found :—(1) That the conductor was injured by reason of the negligence of the motorman in not slackening speed; (2) that the conductor did not contribute to the accident by his own negligence ; (3) that he did not enter into or continue in the company's employment with a full knowledge and understanding of the danger of such employment, and did not voluntarily incur the risk of the particular danger out of which the accident arose.

The jury awarded $1,200 damages, and judgment was given for that sum with costs.

The company appealed to the Court of Appeal, which dismissed the appeal with costs. The court held that the motorman was "a person who has the charge or control," within the meaning of sub-section 5 of section 3 of the Act, and that his employers (the company) were liable for the injuries sustained by the conductor, a fellow-servant, while in discharge of his duty, owing to the motorman's negligence in passing too close to the waggon while it was moving out of the way of the car. (1900) Ontario Reports, vol. 27, page 151.

A Case of Injuries to a Workman while Engaged in Dangerous Work.

A workman employed by a rolling mill company claimed damages for injuries sustained by him while working in their mill. His duty was to take away pieces of metal as they were cut by a pair of shears worked by steam power. While doing this, on one accasion, he was struck by a piece of metal, which was thrown off by the shears, and was severely injured. The machine was perfect of its kind, and it was not shown that a screen or guard could have been used, and the workman was aware that there was danger in the employment in which he was engaged. The danger when steel was being cut was greater than when iron was being cut, and it was while steel was being cut that the workman was injured. At the trial a general verdict was given by the jury in the workman's favor for $250. The company appealed to the Court of Appeal, which dismissed the appeal with costs. The court held that there should have been some system of giving warning when steel was about to be cut, and that this means of reducing the possible danger not having been adopted, the company were liable in damages as at common law. One of the appeal Judges also held that, as the foreman of the works had been in the habit of warning the workmen when steel was to be cut, and had neglected to do so on the occasion when this accident happened, the company were also liable under the Workmen's Compensation for Injuries Act. (1900) Ontario Appeal Reports, vol. 27, page 155.

Cases Under the Mechanics' and Wage-Earners' Lien Act.

In a case brought under the Mechanics' and Wage-earners' Lien Act (R. S. O., ch. 153) by a person entitled to a lien for material furnished to the contractor, the owner was made a defendant and appealed to the Divisional Court from a decision of the official referee ordering him to pay a sum of $94.56 under the following circumstances:—The agreement of the contractor with the owner was for the carpenter work upon a building, and the contract price was $2,200. So far as appeared no work was done upon the building, nor were any materials furnished later than August 10, 1899. At this date the contractor had done all the contract work excepting a few trifling matters esimated by the architect at $25, and he had done $45 worth of work in respect of extras. So that the total amount then earned by him was $2,200. The payments made by the owner were $1,770.70, leaving a balance unpaid of $429.30. The contractor had been in default to his workmen in paying their wages on July 22, 1899, and the owner on that day had paid to the contractor $50 for the express purpose of paying these wages, and it had been so applied. On July 31 the workmen notified the architect that, unless their wages were paid, they would stop working and register liens, and the architect thereupon paid them $45.70 on the owner's behalf. Both these sums were included in the $1,770.70 above mentioned. The only material furnished after the payment of July 31 was of trifling value, and was charged by a lien-holder on August 10, 1899. The last work done upon the building appeared to have been done on August 11, 1899. Three days afterwards, three of the workmen whose wages remained unpaid, and (as was admitted) were entitled to liens for $94.56, brought to the solicitor for the owner liens for that amount, and informed him that, unless they were paid at once, they would register the liens. Thereupon, in order to save expense, the owner paid the amount and $4 additional for preparing the liens. Under these circumstances the official referee held that the owner was not entitled to deduct this sum of $94.56 from the twenty per cent. which he is required by the 11th section of the Act, R. S. O., ch. 153, to retain to answer liens, and directed him to pay into court the full amount of the twenty per cent. on $2,200, viz., $440, without deducting, as he had done, this sum of $94.56. From this decision the owner appealed to the Divisional Court, and the question raised upon the appeal was whether or not the owner was entitled to deduct this sum of $94.56 from the $440, which he was required to retain for the lien holders. The sum paid into court by the owner, after deducting the $94.56, was sufficient to pay all wage-earners in full, and to leave a considerable sum applicable to the liens of persons who supplied materials, but was not sufficient to pay the latter in full.

The court allowed the appeal with costs, and the owner was declared entitled to deduct the $94.56 from the twenty per cent. fund ($440) which the owner is required by the 11th section of the Act to retain to answer liens. The object of the 11th and following sections of the Act is to ensure to persons, intended to be protected by the Act, the formation of a fund in the hands of the owner equal to one-fifth of the contract price, or of the amount of work done, as the case might be, to which they might resort in case of the failure of the contractor to pay them. This fund is to be ascertained at the completion or abandonment of the work, and the owner is directed to retain it in his hands for thirty days from that time. In the present case the work upon the building was abandoned from August 11, 1899, when the last work was done. The twenty per cent. to be retained was therefore properly to be ascertained on August 12, 1899, and the amount was correctly fixed at $440. In answer to the contention of some of the lien-holders that the owner had improperly paid the $94.56 to the four wage-earners, who had threatened proceedings, because it was paid too soon, and because the whole of the twenty per cent. upon the contract price should have been retained for thirty days, it is pointed out that the only object of requiring the owner to retain the twenty per cent. for thirty days is to give persons entitled to liens a chance of enforcing them against the fund directed to be re-

tained. The position of all the lien-holders was precisely the same as if the owner had retained the $440 for the full thirty days, because at the end of that time the wage-earners, to whom the $94.56 was paid on August 14, would have been entitled to receive that sum, and the other lien-holders would have been entitled to the balance. No one was injured by the owner having paid the $94.56 at the beginning, instead of at the end of the thirty days, and therefore no one could complain. But the owner by making a payment before the expiration of thirty days takes the responsibility of showing that he places the other lien-holders in no worse position by doing so; and this the owner did in the present case. Section 12 of the Act was urged against the appeal being allowed, but it does not apply to moneys which the owner is directed to retain, and so did not affect the case. That section merely gives authority to the owner, without the consent of the contractor, but upon mere notice to him, to make payments out of the contract price direct to persons who would be entitled to liens, but limiting the right to make such payments to the moneys which the owner is not directed to retain under section 11. This case in affect decides that the owner of a building is not prohibited from making payments (before the expiry of the thirty days from completion) out of the twenty per cent. reserve, required by section 11 of the Act, to persons entitled to liens, but he makes such payments at his own risk as against any one ultimately prejudiced by such payment. (1900. Ontario Reports, vol. 31, page 546.)

Effect of a Mechanics' Lien on Mortgage Interests.

The following points have been very recently decided by a Divisional Court with respect to the effect of a mechanics' lien on mortgage interests in the property:

In order to find the interest of a mortgage in an action to enforce a mechanics' or wage-earner's lien under the Mechanics' and Wage-earners' Lien Act, such a mortgagee must be made a party to the action within the 90 days mentioned in section 24, sub-section 1, otherwise the lien absolutely ceases to exist as against such interest. The decision on this point follows the decision in the cases of the Bank of Montreal vs. Hoffner, reported in volume 10 of the Ontario Appeal Reports, page 529, and of the Cole vs. Hall, reported in volume 13 of the Ontario Practice Reports, page 100. Wide and comprehensive as is the language used in sub-section 35 and 36 of the Act, it was not intended to make so radical a change in the procedure as to enable a claimant (plaintiff), who has not constituted his action with the necessary parties, and who cannot make them parties after judgment on a reference as to encumbrances on the property, to bind them by serving them with a notice of trial under those sections.

In this same case the court also held, one of the Judges dissenting, that a mechanics' lien attaches to the increased value, if any, in priority to a mortgage, as soon as lumber, which is to be used in the construction of a building upon the land, is placed upon the land, and before the lumber is incorporated into the building. And when the lumber, paid for by the mortgagee out of advances under his mortgage, was removed by the owner to a mill to be planed, and the mill owner sold it to satisfy his charges and paid the balance to the mortgagee, the court held, that at most the act of the mortgagee amounted to a conversion of the lumber, or proceeds of its sale, to his own use. The Mechanics' Lien Act provides no machinery enabling the court to assess damages against anyone in such a case, so as to give lien-holders the benefit of the amount of such damages.

Who is an "Owner" Under the Mechanics' and Wage-Earners' Lien Act.

Upon an appeal from the judgment of a county Judge, reversing his judgment, the Court of Appeal for Ontario held that a person is not an "owner" within the meaning of the Mechanics' and Wage-earner's Lien Act, and as such liable to me-

chanics' lien proceedings for work done or materials placed upon land in which he has an interest, unless there is something in the nature of a direct dealing between the contractor and the person whose interest is sought to be charged. Mere knowledge of, or consent to, the work being done or the materials being supplied, is not enough there must be a request, either of an express nature, or implied, from circumstances, to give rise to the lien. (1900. Canada Law Journal, vol. 36, page 421.)

In this same case a Judge of the High Court of Justice held that sections 41 and 42 of the Act, limiting the "costs of the action under the Act" to twenty-five per cent. of the amount of the judgment, besides actual disbursements, do not apply to the costs of an appeal from the decision of the Judge or officer trying the action. The court appeared to think, without, however, so deciding, that the costs of such an appeal are within the scope of section 45 of the Act. This decision is reported in the same volume of the same periodical as the previous decision, at page 421.

An Employer's Liability Assurance Case.

A firm of contractors brought an action against an employers' liability assurance corporation to recover part of the premium paid by them to the corporation for an employers' liability policy, which had been cancelled, and also for indemnity under the policy in respect of a workman's claim which arose while it was in force. The facts, shortly stated, were these: The defendant, corporation, had its head office in London, England, its chief office in Canada at Montreal, its chief agency for Ontario at Toronto, and a local agency at Hamilton. The local agents of the company, without authority from anyone, upon the request of the assured firm, and after some correspondence with the chief agent for the company in Ontario as to other changes, which had been refused to the knowledge of the assured firm, altered an employers' liability policy which had been sent to them (the local agents) for delivery to the assured firm. The alteration consisted in making the policy comprehend the workmen at a place other than those places named in the policy. After this aleration had been made the local agent handed the policy to the assured firm, who paid him the premium. The local agents then sent the premium to the chief agent for Ontario, and advised him at the same time of the alteration made. The power to make any changes in the policy did not rest in the local agents, nor in the chief agent for Ontario, but only in the manager and chief attorney for Canada, who was not notified of the alteration. The trial Judge held that the defendant company could not be held to have authorized the alteration, and were not bound by the contract as altered. (1900, Ontario Reports, vol. 31, page 666.)

A Case Under the Workmen's Compensation for Injuries Act.

A machine, perfect in itself, is, if applied to some purpose for which it is unfitted, defective within the meaning of section 3, sub-section 1 of the Workmen's Compensation for Injuries Act (R. S. O., ch. 160).

To state in the defence that notice of the accident has not been given, and that the defendants intend to rely on that defence, is not sufficient. Formal notice must be given in accordance with the provisions of section 14 of the Act. In deciding this particular point the court applied one of its previous decisions (Cavanagh vs. Park, 1896) reported in the Ontario Appeal Reports, vol. 23, page 715. In that case the court held that the provisions of section 14 of the Workmen's Compensation for Injuries Act, 55 Vic., ch. 3, an Ontario statute, are not complied with in merely setting up as a defence that the notice of action relied on by the person bringing the action is defective, or that person against whom the action is brought must give formal notice of such an objection not less than seven days before the hearing of the action if he intends to rely upon it. (1900, Canada Law Journal, vol. 36, page 421.)

Case Under the Workmen's Compensation for Injuries Act

There were three casese in the docket of the Fall Assizes, which opened at Hamilton on October 15th, of actions for damages under the Workmen's Compensation for Injuries Act.

The first was the suit of McMenemy v. the Canada Screw Company, to recover $1,000 compensation for the loss of a hand.

The plaintiff was Mrs. Ellen McMenemy, a widow. She claimed that on January 31st last, while she was using a grindstone in the works of the company, through the unguarded condition of the stone, a wrench slipped, forcing her right hand against the stone and causing injuries necessitating the amputation of some of the fingers and rendering her hand useless.

The defence was that Mrs. McMenemy had been employed at the works for twelve years; that the grindstone was not dangerous, and that she had been careless, looking about her when she should have been watching the machine.

The jury were out an hour and returned a verdict in favor of the defendant, Canada Screw Company.

Another suit was that of George Fallis against the Gartshore Pipe Foundry Company for $5,000 for the loss of an eye. While the plaintiff, a teamster, was delivering goods to the defendants' yard an employee of the company was chipping rough edges from castings in another part of the yard, and a small chip flew across the yard and struck him in the eye, causing the loss of sight. Owing to the plaintiff's absence from the city the case was laid over to the winter assizes, which open in January.

The suit of Green v. the Hamilton Mountain Park Company for $10,000 for the loss of a life, was settled, the defendant paying the plaintiff $850 and all costs. The accident happened on June 9, 1900, the husband of the complainant was in the employ of the defendants, who operate an incline railway, running up to the table land, on the south of the city. Deceased was second engineer, and was instructing the head engineer at the top to proceed on the car half way down to do some oiling, he was to give the engineer at the top a signal when he was out of danger the man above did not wait for the arranged signal, but started the car, crushing the deceased in six inches of space between the car and the retaining wall. The injuries received resulted in death the next day. The defence claimed carelessness on the part of the head engineer, and defective construction, six inches space being too little left between the retaining wall and the car.

At the Assize Court, Guelph, on the 10th and 11th of October, a case was tried under the Workmen's Compensation for Injuries Act. The plaintiff, an employee of a local factory, on March 29, while working a circular saw, had his thumb and three fingers cut off. He claimed that a guard which is used on such saws was lacking, and that a divider was on the machine. The defence was that the man did not exercise the necessary care, and placed his hand where no good workman should at a circular saw table. The case hinged mainly on where a man should stand in doing his work at a circular saw table. The jury found that (1) the injury was caused through no fault or negligence of the defendants; (2) that it occurred through plaintiff's incompetence; (3) it could have been avoided by reasonable care; (4) the machinery was securely guarded. Plaintiff may appeal.

Case of an Employee Injured by Reason of Defect in Gangway.

A workman was employed by a school board to carry mortar to some masons (also employed by the school board) who were building a wall on land belonging to the latter. When the wall had been put up, a foreman, who was in general charge of the work, directed the workman and one mason to do the tuck-pointing the next day. In order that the mortar might be carried to the mason at the foot of the wall these two made, of some of the planks that had been used in scaffolding, a gang-

way from the top of the wall to an adjacent building, and from there to the ground. Whilst the workman was walking along this gangway with a load of mortar an insecurely fastened plank gave way, and he was injured .

In the action for damages which he then brought against his employers it was decided :—(1) that at common law (that is, apart from there being any statute on the subject) his employers were not liable for the accident, as the injured man and the mason were fellow-workmen (neither being bound to obey the other) who had exercised their own judgment as to the best means of building the gangway, and as the material supplied by the employers (the planks) would have proved strong enough if they had been properly fastened.

It was also decided that (2) the employers were not liable under the terms of the Workmen's Compensation for Injuries Act, because the gangway was not constructed by any one under their orders (as a superintendent foreman) whose commands the injured man was bound to obey.

(Ferguson vs. Galt Public School Board. Canadian Law Times, vol. 20, p. 397.)

Case Concerning Unreasonable Articles of Apprenticeship.

A boy, under twenty-one, was bound for four years to a firm of iron-turners. It was agreed that at the end of the four years the boy's surety in the articles of apprenticeship should pay the firm $300 for teaching him the trade, and that if before the end of that time he was either dismissed for good reasons, or if he left the firm the $200 should then be paid immediately. The boy was to work, in all, for a time equal to four years of 310 days of 10 hours each; but the firm could at any time reduce the number of hours' work to be done in a day. The firm agreed to pay him 40 cents for every full day's work during the first year, forty-five cents in the second year, fifty cents in the third year, sixty cents in the fourth year and to give him a bonus of $25.00 if he completed the fourth year.

The boy worked for about eighteen months, and then stopped going to the shop, saying that for various reasons he found that the work was hurting his health. The firm said that he wilfully left their employment, and sued his surety for $300.

It was decided that the articles of apprentice were unreasonable, because the firm could, if it choose, reduce the number of working hours at any time, and thus not only compel the boy to work for a greater number of days in order to serve his full time, but also reduce his weekly wages. The apprenticeship was therefore of such a nature that the boy was never legally bound by it, and the action was accordingly dismissed. (McGregor v. Sully. Ontario Reports, vol. 31, page 535.)

Case of Injuries to a Child Under Fourteen Years of Age.

The child injured in the case was only twelve years of age. He was employed to work at a circular saw. The action for damages for the injuries sustained was dismissed, but an attempt was then made, on behalf of the child, to obtain another trial. The Ontario Factory Act names the different kind of work at which a child under fourteen years of age may legally be employed in a factory, and working of a circular saw is not one of them. But the court decided that though the employer might have been wrong in allowing the child to do such work (and if he had thus contravened the Factories Act he might be fined), yet in order to get damages from the employer it was necessary to prove that the accident really did happen because the child was too young to do the work properly, or because it was too exhausting for his strength. But that was not shown in this case, and therefore, no new trial was granted. (Roberts v. Taylor, Ontario Reports, vol. 31, page 10.)

Case of Accident Causing Death of Railway Contractors' Employee.

J. W. R. was employed by certain contractors, who were constructing a railway. About 6 o'clock one evening J. W. R., returning from his day's work, was

on a loaded gravel train, which was going from the gravel pit (where he had been working) to the place where the gravel was dumped. On the way the train went off the track at a switch. J. W. R. was amongst those killed.

In the action brought against the contractors for damages it was found that the accident had been caused by a misplaced switch, the switch-point having been sprung away from the rail because the lever was out of the notch; it was held, on these facts, that the switch was not properly guarded, and as there was no lock the contractors then in charge of that part of the road were guilty of negligence, and were liable for injuries which might thus happen to their employees. The relatives of J. W. R. were given $2,500 damages. (Romhough v. Balch & Peppard, and the New York & Ottawa Railway Company. Ontario Appeal Reports, vol. 27, page 32.)

Case of Unmarried Man Killed in an Accident.

Another case decided at the same time as the preceding one was that of G. W. G. who was also an employee of the railway contractors, and was likewise killed by the train going off the track. But G. W. G. (unlike J. W. R. in the last case) was unmarried, and he did not even give any regular sums of money to his parents. The contractors therefore said that as the parents (who sued for damages) did not receive any certain amount from their son, their means of support were not lessened by his death, and that, therefore, they were not entitled to any damages. It was decided, however, that in such case parents need not prove that their son had been in the habit of regularly helping to maintain them, but that if they could only show that there was a reasonable expectation that they would have received such assistance from him in the future, had he lived—that fact would entitle them to recover damages for his death. In this case the $1,500 awarded to the parents by the jury was, in view of circumstances, reduced by the court to $1,000.

(Green v. New York and Ottawa Railway Company, and Balch and Peppard. Ontario Appeal Reports, vol. 27, page 32.)

Case of Employers Liable for Injuries Caused by a Defective Machine.

A firm of Cement Manufacturers had in their factory a machine known as a "screw conveyer," which took from one part of the building to another the current discharged into it from a drop spout connected with a conveyer. The conveyer was operated by machinery, and made from 70 to 80 revolutions per minute. It was formed of a large iron screw, set in a wooden box, the cover of which was removed. Some months after the machine was put up, partly in order to mix some fine cement with the ordinary cement that was passing from the spout. This fine cement was in sacks, which, when full, weighed about 65 pounds. An employee was, as directed, slowly emptying the cement from one of these sacks, when it stopped coming out. He shook the bag, and in doing so lowered it. The screw caught it, and the jerk pulled the employee round, and his hand was brought down between the side of the box and the screw. For the injury thus sustained he sued his employers, and the jury gave him $500 damages.

The cement manufacturers appealed from this on two grounds, which will be considered separately: (1) They said that there has been no negligence on their part, and that the employee would not have been hurt if he had not been negligent himself. The court decided that though the machine was perfect for the purpose for which it was made (i.e., as a conveyer), yet that it was not meant to be a "mixer," and that, therefore, when it was used as one it was defective machinery, and therefore the employers were liable for injuries caused by it to their employees. It was also held that the employee himself had not been careless.

(2) Workmen's Compensation for Injuries Act (under which this action was brought) says that the injured employee must give written notice of the injury to the employers within twelve weeks after the accident? In this case the cement manufacturers claimed that, as his notice had not been duly given, the suit should be dis-

missed. But another part of the same Act provides that if the employers intend to rely on the want of this notice as a defence to the action, they themselves must give the employee notice that they mean to do so seven days before the trial. In this instance that had not been done. The employers had merely mentioned the want of notice in their statement of defence, which was not sufficient. The verdict for $500 was therefore upheld.

(Wilson v. the Owen Sound Portland Cement Co., Limited, Ontario Appeal Reports, vol. 27, page 328.)

Case of Employers Neglecting to Take Due Precautions for Safety of their Employees.

The employee of a company was directed by another employee who was in authority over him to remove the waste near a circular saw, which was in motion. While doing so he had his left arm cut off. He then sued the company for damages, alleging that his employers had been guilty of negligence in not having the saw guarded, and also in not having a proper way arranged for going in and out near it to get the waste.

The jury could not agree whether or not the employee was (as he claimed) told by the employee in authority over him to approach the circular saw in the particular way he did so. (If this had been proved to the satisfaction of the jury, the company, of course, would have been held responsible for the act of the latter—i.e., for the order he gave to the employee under him.)

But, on the second part, the jury decided that the saw was unreasonably dangerous, because it was not properly guarded, and therefore the employee was awarded $500 damages.

An effort was afterwards made to have this verdict and judgment set aside, on the ground that the jury had not agreed on a general verdict—nor had it decided that the employee had been injured in obeying the order of his superior. But it was held by the court that the fact that the jury had found that the company was negligent in not having the saw properly guarded was sufficient, and the verdict was therefore not set aside.

Judgment delivered in a divisional court of the High Court of Justice, at Toronto, in November, 1900.—Blow v. London & Petrolea Barrel Co.

Case of Illegal By-law of a Trade Union.

P. was a member of the Toronto Musical Protective Association, and was also an active militiaman, and, as such, was a member of the band of the 48th Highlanders.

The Musical Protective Association, by an amendment to its by-laws, forbade any of its members to play with musicians who were not members, and made anyone who should do so liable to be fined. P. played in uniform at a concert in which the band of the 48th Highlanders took part, by permission of the officers of the regiment. All the other members of the band were not members of the Musical Protective Associaion. P. was therefore fined $2, and his name was afterwards struck off the membership list of the association, because he had not paid the fine. P. contended that the amendment under which he was fined was illegal, and he sued the association accordingly.

It was decided by the court that as P, being a member of the militia, attached to the band of his regiment, was obliged to play when the band was ordered to do so, no matter how many of its members did not belong to the Musical Protective Association, the amendment under which he was fined for so playing was invalid, because it was unreasonable. It was also decided that the amendment was invalid because it was in restraint of trade; and that it was contrary to the provisions of the Militia Act, which obliges regimental bandsmen to play whenever they are duly directed to do so.

P. was therefore awarded $20 damages for having been wrongfully dismissed from membership in the Musical Protective Association; and it was also declared that the

by-law under which he was expelled was void, that his expulsion was illegal, and that he should enjoy all the benefits of membership without any further interference.

(Parker v. The Toronto Musical Protective Association, judgment delivered at Toronto by Mr. Justice McMahon, on December 18, 1900.)

Case of Fatal Accident Caused by Negligence of Railway Company.

J. A. C. was learning the system used for checking freight cars. He was not paid anything by the railway company, thus being only a licensee. While on the track he was run over and killed by an engine and tender going backwards.

The father of J. A. C. sued the company on behalf of himself and wife. The jury decided that the company had been guilty of negligence in allowing J. A. C., who was only a novice at the work, to go alone without an experienced car-checker, and awarded $3,000 damages.

The railway company appealed on the ground that the deceased was not employed by them, but was only a licensee, to whom they had given permission to learn the business of car-checking.

It was decided that the deceased was only a licensee, but that the company was nevertheless liable for negligence, and that they had been negligent. It was held, however, that as the deceased was only 22 years of age at the time of his death, and he was not earning anything, the damages given by the jury were excessive, and the amount was therefore reduced to $1,500.

(Collier v. Michigan Central Railway Company, judgment given by the Court of Appeal on November 13, 1900.)

Question as to Who can Bring an Action Against Employer for Injuries Causing Death of His Employee.

The various statutes respecting the liability of employers state by whom and for whose benefit the action may be brought. Generally it may be said that such actions can only be brought on behalf of those who received, or who had reasonable expectation of receiving support from the deceased employee. In this case the employee was unmarried, but the action for damages was taken by his administrator for the benefit of his mother. On the very day that the issue was joined (i.e., when both parties to the suit had put in their pleadings and had agreed to have the case tried), the mother died. It was then contended by the employer that the action must be dismissed—that, the mother being dead, there was no need for damages for her support, and that the right of action ceased at her death. It was decided, however, that in such a case the death of the mother might reduce the amount of damages to be awarded, but that her decease did not destroy the right of action, and that any damages that might be given would form part of her estate.

(McHugh v. Grand Trunk Railway Company; judgment given by Mr. Justice Ferguson, at Toronto, November 6, 1900.)

A Case of Child Labor as Affected by The Factories Act.

A boy twelve years of age was employed in a factory to work at a circular saw, and had his hand injured by allowing the fingers to get into the slot beneath which the saw worked. He sued for damages, alleging negligence on the part of his employers. At the trial the case was withdrawn from the jury, and a non-suit directed to be entered. An appeal was taken to the Divisional Court to have the non-suit set aside, and a new trial granted on the following grounds:—(1) That at common law the fact of employment of a person of tender years to work a dangerous machine (such as a circular saw) may in itself constitute negligence, and it should have been left to the jury to say whether or not, under the circumstances disclosed in evidence, the employment in this case constituted negligence on the part of the employers. (2) That the employment of

the boy constituted a breach of the Ontario Factories Act (R.S.O., Chap. 256), and was therefore negligence, which should have beeen submitted to the jury. (3) That on the facts in evidence the question of contributory negligence—one of the defences to the action—on the part of the boy could not arise, or if it did it was a question for the jury.

The Divisional Court dismissed the appeal and affirmed the judgment of the trial judge. The appeal judgment, in reviewing the evidence, declares that it cannot be said that the machine at which the boy was put to work was dangerous, or not sufficiently protected, or that, with ordinary care, there was any risk in doing the work assigned, or that the boy was not sufficiently informed as to the manner of doing the work. It seems to have been a simple operation, easily done by any handy youth, such as the boy appeared to be. Nor could it be found on the evidence that the injury arose from the immature age of the boy, rendering the work too exacting or too exhausting for him? He appears to have undertaken the work understanding what he had to do, and being apt enough to do it with ordinary care. He had competent knowledge of the danger to be avoided, and could not have been hurt had he not allowed his fingers to get into the slot beneath which the saws worked—a place intended for the strips of board, and into which he had no call to put his hand. The injury appears to have been the result of either injury or accident, for which an adult could not sue. Then how is the situation different because of the boy's infancy, or because of his being under the lawful age of employment. There was no evidence that the age was asked by, or known to, the employers. No doubt the boy was under fourteen, and should not have been employed in the factory. The Factories Act (R.S.O., 1897, Ch. 256, sec. 2, sub-section 5, and sec. 5) says that no child shall be employed in a factory except at certain kinds of work (under which the work in question in this case does not fall) and "child" is defined as a person under fourteen. But though this subjects the employer to a penalty, it does not give rise to a civil action for damages, unless there is evidence to connect this violation of the Act with the accident. The work assigned may be too dangerous for a child, or too exhausting in its demands, so that what an older person might do would overtask the child and so contribute to the injury. But no case was made here coupling the accident with any such illegal employment. Then, again, in the absence of evidence tending to show that the child injured was not competent to undersand the situation—the work to be done, the manner of doing it, and the attending risk—and to appreciate the need for due caution according to the circumstances, the court may infer capacity in the case of youth of twelve or thirteen who shows intelligence in his manners and his answers. The evidence of the boy himself in this case established all that was needed to show that he was entitled to no greater consideration than an adult suing for a personal injury.

(1899, Ontario Reports, vol. 31, page 10.)

Conditions in Accident Insurance Policy.

M. who was a baggageman employed at a railway station, took out an accident insurance policy, in which his occupation was so described. The policy stated that if he was injured "in any occupation or exposure" which was classed by the insurance company as being more hazardous than that of a baggageman, he should only receive whatever insurance the premiums he had paid would have purchased if he had said he was engaged in the more hazardous business. Another clause of the policy provided that no insurance should be paid if death was caused by "voluntary exposure to unnecessary danger."

M. was killed whilst coupling cars, which was not part of his duty as baggageman. The insurance company claimed therefore that the accident came within the exceptions above mentioned. The evidence showed that M. had coupled cars on other occasions, and that, in this particular instance, he thought that the brakeman had requested him to make the coupling.

The court decided that the words "occupation or exposure" did not include the casual act of coupling; that there was not "voluntary exposure to unnecessary danger," and that therefore the representatives of M. were entitled to the sum for which he was insured.

(McNevin v. Canadian Railway Accident Insurance Company. "The Canadian Law Times," vol. 21, page 76.)

Question of a Father's Liability for the Negligence of His Son.

H. D., a minor, about twenty years of age, was driving his father's horse and buggy, when the wheel caught the wheel of F.'s waggon, causiug the latter's horse to run away. F. sued the father of H. D. for damages for injuries thus caused, claiming that as at the time of the accident H. D. was employed by his father and using his horse and buggy, the father was liable for the results of his negligence, in the same way as an employer is liable for the negligence of his employee whilst engaged in his business.

The evidence showed that H. D. was living at home, assisting his father in the work of the farm, but not being paid any wages for so doing. Occasionally he worked for others, and the money which he thus earned he was allowed to keep, and with it he bought clothes, etc., for himself. On the day of the accident he was drviing to town to purchase some articles for himself with the money he had made.

The court decided that on these facts the relation of employer and employee did not exist between the father and son, and that, therefore, though the latter had been negligent, the father was not liable for the injuries caused thereby. (File v. Dugger, Ontario Appeal Reports, volume 27, page 468.)

An Employee not Having any Superintendence.

C., a dressmaker employed in a departmental store, was injured by the fall of the elevator in which she was going down at the end of the day's work. She sued her employers for damages. It was proved that all due precautions had been taken regarding the safety appliances of the elevator. But it was also shown that the accident would not have happened if the person in charge of the elevator had made a proper use of the brake. The question, therefore, was whether the employers were responsible for this negligence on the part of their employee—the person in charge of the elevator. It was decided that the latter was not a person having any superintendence entrusted to him by his employers; and that, therefore, according to the Workmen's Compensation Act, the employers could not be made liable for injuries caused to another of their employees by the negligence of the person in charge of the elevator. The action was therefore dismissed. (Carnahan v. The Robert Simpson Company. Judgment given at Toronto, December 24, 1900.)

Technicality Overruled by Justice.

A public school teacher, who was dismissed because the school trustees wished to engage someone at a lower salary, sued for the amount of his salary which he claimed was in arrears, and obtained a judgment for that sum and for three months' additional salary because of the fact that he had not been paid at the proper time. The school trustees appealed from this judgment, and alleged that the agreement made with the teacher was void, because it was not sealed with the corporate seal, and that therefore they were not liable. The court said that the law would not allow justice to be defeated by such a technicality, dismissed the appeal, and confirmed the judgment in favor of the teacher.—Re McPherson v. The Public School Trustees of the Township of Osborne. Judgment given at Toronto, January 16, 1901.

Employer Liable for His Employee's Negligence.

W. B., a corporation labourer at Hamilton, was working on the street when a waggon coming from behind knocked him down, and so injured him that he was prevented from working for some time. The waggon was driven by W. K.—but it belonged to H. K., by whom W. K. was employed. W. B. therefore sued H. K. for injuries caused by the negligence of his employee whilst acting in the course of his employment. Judgment was given against H. K. for the amount of wages lost by W. B., together with the sum paid doctors.—Ballantine v. Kuntz. Judgment given by Judge Snider in the Division Court at Hamilton, December 20, 1900.

Street Car Vestibules for Conductors.

A by-law of the City of Toronto requires the Street Railway Company to provide their cars with proper and sufficient vestibules for protecting the motormen and other persons in charge of the car from exposure to cold, snow, rain and sleet, while engaged in operating the car. The cars of the Toronto Street Railway Company are provided with vestibules at one end—but have not any at the rear end for the protection of the conductor. On this account the company was (about two years ago) convicted for breach of the by-law, and fined accordingly. Recently the company appealed, and asked to have this conviction set aside, contending that the conductors were not "persons in charge" of the cars, and that anyway the by-law only meant that there should be one vestibule on each car. The Court held, however, that the only sensible meaning which could be drawn from the words of the by-law was that there should be two vestibules on each car. The conviction was therefore affirmed. There was no appeal from this judgment.—Re Toronto Street Railway Company. Judgment given by Divisional Court at Toronto, January 22, 1901.

Question of What is a "Way" Within the Workmen's Compensation Act.

The Workmen's Compensation Act provides (amongst other things) that an employee shall recover damages from his employer when he is injured by reason of "any defect in the condition or arrangement of the ways . . . connected with, intended for, or used in, the business of the employer."

In this case the fireman on a tug-boat, whilst attempting to pass along the outside rail from the engine room to the furnaces, slipped and fell into the water and was drowned. His father sued the owners of the tug-boat for damages, alleging that the accident was caused by the fact that slabs of wood, intended to be used for fuel, were piled to a height of four feet upon the decks and passageways. The owners of the boat replied that there were other safe ways of going from the engine room to the furnaces and that the fireman had himself been negligent; and that anyway the passage from one place to another was not such a "way" as was meant by the Workmen's Compensation Act.

A jury gave a verdict in favor of the father of the deceased, but the Higher Court agreed with the contentions of the owner, and set aside the verdict and dismissed the action. (Young v. Owen Sound Dredge & Construction Company. Judgment of the Court of Appeal, November 13, 1900.)

Case of a Girl Employed in a Factory.

A girl, fifteen years of age, was employed in a factory, her work being to feed and run a machine for stamping cardboard. In taking out the stamped, and putting in the unstamped cardboard, she was obliged to place her hands for an instant between the stationary and the moving parts of the machinery. She was given a good deal of practice in this work, and men did it for several days without any accident, and apparently without any difficulty. On one of the following days, however, her left hand was caught between two plates at the top of the machine, and was badly crushed. Her employers were sued for damages.

At the trial the girl could not tell how it came to be in the position in which it was when it was caught, nor could she give any explanation regarding the accident, which no one saw happen. Her father said that he never knew that she was working at the machine. Her employer admitted that he know the kind of work she was doing, but said that he did not consider it to be a breach of the Ontario Factories Act on his part. The section referred to says that "a child or young girl shall not be allowed to work between the fixed and traversing part of any self-acting machine, while the machine is in motion." A "young girl" means a girl between fourteen and eighteen years of age.

Upon the evidence given the Court decided that even if the employer had contravened the Factories Act by engaging the girl to do such work, it was still necessary in order to make him liable to prove that he had been guilty of some negligence which had been the direct cause of the accident. As this had not been shown the action was dismissed.—Fahey v. Jephcott. The Canadian Law Times, vol. 21, page 143.

Employee Injured by Negligence of One in An Authority Over Him.

M. was the driver of an engine going from Cobourg to York. On arrival at Port Hope the Conductor showed M. a despatch saying that their train would meet an eastbound freight train, called "2nd 86," at Newtonville. M. read the despatch and asked the conductor if it was all right. The latter replied that it was, and gave the signal to start. Two miles west of Port Hope the train collided with another, called "1st 86," and M. was injured. M. sued the railway company for damages under the Workmen's Compensation Act, alleging that the accident was caused by the negligence of the conductor, whose orders he was bound to obey, and that therefore the company was liable.

The court decided that the despatch had nothing to do with the matter, and that the accident was caused by the negligence of the conductor in failing to examine the train register at Port Hope. By one of the company's rules, the driver is obliged to obey the conductor's orders about starting a train "unless they endanger the safety of the train," which means that unless the driver had reason to believe that they endangered the safety of the train." In this case the driver had no reason to think so, because he was entitled to believe that the conductor, who said it was all right, had examined the register as he should have done. Judgment was therefore given in favor of M. for damages to the amount previously agreed upon between the parties.

Miller v. Grand Trunk Railway Company. Judgment given by Mr. Justice Street, February 11, 1901.

What Constitutes a Defective Machine.

G. was employed to work a jointer machine in a piano factory. In the course of his work he joined and left a piece of wood in its usual place, when it fell, and forced his left hand upon the knives of the machine—which were unguarded. G. sued his employers, alleging negligence because the knives of the machine were unprotected, and because this defect was known to their foreman. A jury gave G. damages. When the employers appealed, this verdict was sustained, and it was held that upon the evidence it had been proved that the jointer was a defective machine, and that its defective nature had been known to the foreman. The court adopted "the governing principle that when a machine is defective with reference to danger, and such defect is within the knowledge of the employer, he is then liable."

Godwin v. Newcombe. Judgment given by the Court of Appeal, March 2nd, 1901.

Workmen's Compensation Act.

H. was employed by contractors who were building a sewer. He was told by the foreman to do some work on a part of the sewer where he had never been before. When he had finished the work, he attmpted to ascend by a ladder he saw, and by which he thought he could get to the surface. Several of the rungs were missing and he fell and

was injured. He sued his employers for damages, claiming that the ladder was such a "way" as is referred to by the Workmen's Compensation Act, and that therefore the employers were liable for any injuries caused to their employees by reason of its being in bad repair. The court decided that the ladder was not such a "way," and that he himself was reckless in making such an attempt to get out of the sewer. The action was therefore dismissed.

Hoak v. O'Leary. Judgment given by a Divisional Court at Toronto. February 19, 1901.

ACTION BY EMPLOYEE OF CONTRACTORS.

B. was employed by a firm of contractors, and while working in a ditch, at a distance of about ten feet below the surface, was injured by a cave-in. He claimed that the accident was caused by lack of proper "shoring," and that he was injured for life, and sued the contractors for $5,000 damages. The contractors asserted that every precaution had been taken, and that the accident was occasioned by what could not have been foreseen.

During his cross-examination B. admitted that the contractors had treated him well—that they had paid $140 for doctors' bills and hospital charges, and had insisted upon his returning to the hospital after he had left it. B. also admitted that he had gone out of the hospital when the doctor had advised him not to do so, and that he had taken a few drinks, which the doctor told him had delayed his recovery.

The jury gave a verdict in favor of the contractors, and the action was dismissed. (Brennan v. Harding & Leathorne—London Assizes, April 12th, 1901.)

BOY INJURED IN A FACTORY.

A boy, between fourteen and fifteen years of age, who was employed in a factory, was told to place some boards beside one of the machines. When he did so, one man who was in charge of the machine was some distance away, standing at a window. The boy, thinking that the machine was not in motion, put his hand on it to brush off some dust, and was severely injured by the knives. He sued his employers for damages, and the jury found that the boy had used reasonable care, considering his age, and that his employers were guilty of negligence, because they had not a guard on the knives, and because their employee, the man in charge of the machine, was not attending to his proper duty at the time of the accident.

The court, however, reversed this, and held that a boy of fourteen years of age was (unless proved to be otherwise) capable of understanding the danger he ran; and that his employers had not by their negligence caused the accident. The action was therefore dismissed.

Moore v. J. D. Moore Company.—Judgment given by Mr. Justice Street, April 15th, 1901.

ACCIDENT DUE TO DEFECTIVE APPLIANCES.

K., a conductor employed by the Toronto Suburban Street Railway Company, was holding the trolley rope tightly in his hand, when, owing to a defect in the joint of the wire above, his thumb was pulled off. He sued the company for damages, and the jury gave a verdict in his favor for $400, on the ground that the company was responsible for accidents caused by defects in its appliances.

Knapp v. Toronto Suburban Street Railway Company, Toronto Assizes, April 17th, 1901.

AGREEMENT BETWEEN EMPLOYER AND EMPLOYEE.

A. engaged B. as his employee, the agreement being that, unless A. sold out his business before, the employment was to last for one year, and that B. was to be paid both a weekly salary, and, at the end of the year, a certain percentage on the net profits made during that time.

Before the end of the yearA. sold his business, and refused to pay B. a percentage on the profits made up to the time of the sale. B. claimed that he was entitled not only to that percentage, but also to a percentage on the profits made by A. by the sale of his business.

The court decided that B. had a right to a percentage on the profits made up to the date of sale; but that, as he never owned any part of the assets of the business he was not entitled to any part of the profits of their sale.

In re Sims and Harris.—Canadian Law Times, volume 21, page 231.

Loss of Life Through Negligence.

Edward Sim was employed on a steam tug in catching and packing fish in Providence Bay, Manitoulin. The boxes in which the fish were packed had handles at each end. Sim placed in one of these handles one of the iron hooks provided for such use by his employers and was dragging the box to the other end of the vessel to be stored when the handle came out, and Sim, losing his balance, fell overboard and was drowned. The widow of the diseased sued his employers for damages, alleging that the handle which had come out was a rotten one, and that it was insecurely attached to the box, and that they, therefore, had been negligent and were liable for the consequences; it was also claimed that the employers were negligent because, contrary to the provision of an Act regarding the inspection of steamboats, they had failed to have on their tug, at a convenient place, at least one life-buoy, with a proper heaving line attached to it.

The jury found that the accident would not have been fatal if a buoy had been in its proper place; and that if there had been a proper inspection the defective handle might have been discovered; and that while the employers had been negligent the deceased had not. Th Judge determined that there was no right of action against the employers on the ground of their not having a life buoy in the proper place; he also held, however, that there was evidence that the employers had been negligent in not having had some inspection in order to see that the handles placed upon the boxes would resist the force which it was necessary to use in dragging them, as an employer is bound to exercise due care to see that proper materials, machinery and plant are supplied.

Judgment was given against the employers for $1,500 damages, and this was sustained on appeal. (Sims v. Dominion Fish Company.—Judgment given at Toronto May 14th, 1901.)

Liability of Electric Company for Negligence of Motorman.

According to the Workmen's Compensation Act (Ontario) an employer is responsible to his employees for the acts of a "person who has charge or control" of any of his works, machinery, etc. A motorman of a local electric car negligently allowed the car to collide with a passing vehicle, whereby the conductor, who was properly standing on the side step of the car taking the fares, as he was bound to do, was struck and injured. it was held that the motorman was a "person who had charge or control" within the meaning of the Workmen's Compensation Act, and that, therefore, the electric company was bound to pay damages to the conductor for the injuries caused him by reason of the negligence of their motorman.

(Snell v. Toronto Railway Company. Judgment given by the Supreme Court of Canada, 1st April, 1901.)

Infringement of Union Trade Mark.

The Journeymen Tailors' Union of America, through one of their members, named Robinson, of Hamilton, has brought a suit against a merchant named McLeod of the same city, to restrain the latter from continuing an alleged infringement of the union's

registered trade mark. The plaintiff was ordered to give minute particulars of the alleged infringement. He appealed from this decision, but it was confirmed by the higher court.

Robinson v. McLeod. Decision given by Mr. Justice Lount, May 31st, 1901.

Employees' Provident Societies.

A point of considerable interest to members of labor organizations generally, and to employees of railway companies in particular, was decided, so far as Ontario is concerned, by a judgment recently delivered by Mr. Justice Meredith.

John Lucy was employed by the Grand Trunk Railway Company as a brakeman, and whilst working in that capacity at Oshawa he met with an accident which resulted in the loss of three fingers. Lucy claimed that the accident had been caused by negligence for which the company was responsible, and he therefore sued them for $5,000 damages. The company denied negligence on their part, and claimd that the accident had resulted from the carelessness of Lucy himself.

The company, however, also raised another and more interesting defence. Lucy was a member of the Grand Trunk Railway Provident Society, an organization of which every employee of that company is obliged to become a member, which is partly supported by the Grand Trunk Railway Company, and which has a constitution, one of the clauses of which states that a member of the society cannot sue the company for damages for any accident which he suffers while in their employment. The company claimed that this proviso in the constitution of the Grand Trunk Railway Provident Society debarred Lucy from bringing any action against them for damages on account of the accident referred to, and that the suit should be dismissed without being given ot the jury. The question of law involved was fully argued, and the presiding judge finally decided that the fact that an employee pays dues into such an organization as the Grand Trunk Railway Provident Society does not debar him from suing the Grand Trunk Railway Company; that the employee paid the dues for the insurance which the society gave him; and that despite the clause in the constitution of the society, the fact that he was a member of such organization did not take away the right of an employee to sue the company which employed him.

(Judgment by Mr. Justice Meredith delivered September, 1901.)

Case Under The Ontario Factories Act.

The Ontario Factories Act provides that "a child or young girl shall not be allowed to work between the fixed and traversing part of any self-acting machine while the machine is in motion." Another section of the Act defines a "young girl" as a girl between fourteen and eighteen years of age.

A girl, fifteen years of age, was (unknown to her father) engaged by her employer in running a machine for stamping cardboard. After she had had a fair amount of practice, and after having managed the machine for some days without any apparent fatigue, her hand got caught in the machine and was so badly injured that it was necessary to amputate it. She was unable to explain how it was that her hand came to be where it was when the accident happened, and nobody else was present at the time.

The father of the girl sued her employer for damages, claiming that by reason of the Factories Act he had no right to allow a girl of that age to work at such a machine, and that he was liable in damages for any accident which might occur while she was doing so. The trial judge, however, held that it was necessary to prove that they had been guilty of some other negligence which was directly connected with and caused the accident; and there being no such evdience, he dismissed the action.

The plaintiff appealed, and the Court of Appeal decided that the mere fact that the employer allowed a girl under eighteen years of age to operate between the fixed and traversing part of a self-acting machine was sufficient to render him liable in

damages for any accident which happened to the girl while she was so engaged Judgment was therefore given against the defendant. Fahey vs. Jephcott. Decision of the Court of Appeal for Ontario, Sept. 21st, 1901. See report of the first judgment in this case in the Labor Gazette, vol. 1, No. 7, page 385, March, 1901.

The Lord's Day Act.

An interesting decision was given on October 17, 1901, by the police magistrate of Belleville, in an action under the Lord's Day Act brought against the Trent Valley Paper Company, which was charged with allowing its employees to work on Sunday. The magistrate decided that the Lord's Day Act did not apply to corporations, and he therefore dismissed the complaint.

A Case Under the Workmen's Compensation Act.

One Charles Armstrong, employed by the Canada Atlantic Railway Company, was engaged in shunting cars in the yard of that company at Ottawa, when he received injuries that resulted in his death.

His widow brought an action under the Workmen's Compensation Act against the railway company for damages, alleging that the accident was caused by certain negligence on their part. Now that Act requires that, in the case of any action being brought under it, notice of the accident upon which the action is founded shall be given to the proposed defendant within twelve weeks from the date of the accident, and the action itself shall be commenced within twelve months from the time of the death of the person injured when the accident has resulted in death.

In this instance the action was brought within the proper time; but notice of the accident had not been given to the company within the twelve weeks, and on that ground, the judge at the trial held that there was no right of action under the Act, and, therefore, dismissed the action.

The plaintiff appealed, and the Court of Appeal decided that as the evidence showed that the company was well aware that Armstrong had been killed in its yard, whilst in its employment, and whilst engaged in its work, and as the notice of the accident, if it had been given, would have given them no information which they did not possess before, that afforded a reasonable excuse for not giving the notice. It was said that the whole object of requiring notice of the accident to be given was attained by the knowledge of the company of the occurrence of the accident at the time, and of the cause of it, and that it had not been proved that they had been in any respect prejudiced by the notice not having been given.

A new trial was therefore ordered, the costs of the former one to be paid by the defendant company. Armstrong vs. Canada Atlantic Railway Co. Judgment of the Court of Appeal for Ontario. August 27, 1901.

Case of a Building Accident.

The Hamilton Steel & Iron Co. was constructing, as part of a smelter, an iron stove, which was to be seventy feet in height, with an interior of brick. Eight platforms were put up, one above the other, for the purpose of supplying bricks. K. was engaged on one of these platforms, receiving bricks from below, and handing them on above, and while doing this work he was hit on the head by a brick. K. was attended by a physician, who, it was alleged, was acting in the interests of a company which had insured the Hamilton Steel & Iron Co. against damages by reason of such accidents; this physician obtained from K, for $60, a release of all his claims against the Hamilton Steel and Iron Co.; but K. subsequently repudiated this release, offered to return the money, and sued the Hamilton Steel and Iron Co. for damages, claiming that the accident had been caused by its negligence in not providing proper means of hoisting the materials used in building the iron stove. The jury found that the company had

been guilty of negligence in that respect; but it was unable to decide where the brick came from which injured K. The court therefore held that as it was quite possible that another workman had maliciously caused the accident, the company could not be held liable. It was also held that although the release was not obtained by undue influence or by fraud, yet if K. had on other ground been entitled to judgment against the company, it would have been decided that the release did not bind him. The action was therefore dismissed, but without costs.

(Keenan v. Hamilton Steel and Iron Company. Action tried at Hamilton before Chief Justice Falconbridge. Judgment rendered November 14, 1901.)

Railway Employees and Provident Societies.

At the Hamilton Assizes, in the case of Holden v. the Grand Trunk Railway Co. (which was an action for damages by the widow of the late Walter Holden, a Grand Trunk Railway engineer, who was killed on the defendant company's line), the point arose whether or not the fact that the widow of a deceased member of the Grand Trunk Provident Society has accepted insurance from that institution on the life of her husband debarred her from subsequently taking an action against the company for damages for the death of her husband. The court decided that the acceptance of such insurance did not have that effect; but it is understood that this case will be carried to the Court of Appeal.

In the November number of the Labor Gazette (at page 315) a report was given of a somewhat similar case, the point involved therein whether the fact that an employee of the Grand Trunk Railway Company, who was a member of the Grand Trunk Railway Provident Society (of which every employee of the Grand Trunk Railway Company is obliged to become a member), prevented him from taking an action against the company for damages for injuries caused by the alleged negligence of the company. In that case, apparently, the employee had not accepted anything from the Provident Society, but simply brought his action for damages against the Grand Trunk Railway Company, and Mr. Justice Meredith held that he had a right to do so.

(Holden v. Grand Trunk Railway Company. Judgment delivered by Mr. Justice Falconbridge.)

Case of an Electric Car Accident.

K., a conductor employed by the Toronto Suburban Railway Company, while engaged in his duties as conductor, was holding the trolley rope tightly in his hand as the car entered a switch. The trolley pole went in the wrong direction and jerked up K.'s right hand so that it struck the top of the car, pulling his humb off. K. sued the company for damages, alleging that the accident was caused by a defective trolley switch (regarding which K. said that he had complained before the date of the accident to the company), and by an excessive rate of speed.

At the trial the jury awarded K. $400 damages, but the presiding Judge decided that this verdict was not sustained by the evidence, and entered judgment for the company, dismissing the action. K. appealed, and the Appellate Court held that the evidence submitted at the trial was such that the jury was justified in bringing in a verdict for damages; that this evidence showed that the trolley system did not work properly; that there was clearly a defect in the switch, and that the attention of K.'s superior officer had been called to this defect (which apparently caused the accident) before the day of the accident.

The court therefore ordered that judgment should be entered for K. for $400 and costs.

(Knapp vs. Toronto Suburban Railway Company.)

Accident Caused by Defective Machinery

C. was employed by D. who was a manufacturer of woodenware, to work at an "upright post-boring machine." While engaged in this work C.'s left hand slipped over the knob at the end of the "shifter," and was drawn into two connected cog wheels, a part of the gearing of the machine, and two fingers were crushed. C. sued D. for damages for this injury, alleging that the machinery was not properly protected, and that, in view of the provisions of the Workmen's Compensation Act, the machine was in a defective condition. The case was tried with a jury, which found, in answer to various questions, that the gearing of the machine was dangerous, unless proper care was used in doing the work; that it was practicable to guard the machine securely; that D. was aware of the danger in working the machine and that C. was not; and that D. was negligent in not having a guard for the machine. C. was accordingly awarded $125 damages.

(Carter v. Dowswell Manufacturing Company. Judgment delivered by Mr. Justice McMahon.)

House of Lords Decisions Affecting Trade Unions.

One of the most interesting legal questions arising out of possible relations between trade unions and employers is whether, if a trade union, by threats of strike or otherwise, directly forces a firm or company to dismiss an employee or employees, either because they are not members of a union or otherwise, or by the same methods causes an individual or firm to be boycotted, the employee or employees, so dismissed, or the individual or firm boycotted, can recover damages from the trade union. One phase of this question occupied the attention of the English courts a few years ago, and after many judgments had been rendered a decision was finally given in the matter by the House of Lords. This was the famous case of Allen v. Flood, in which judgment was rendered in 1898.

Allen vs. Flood.

Flood was a shipwright, employed "for the job" in repairing the woodwork of a ship. He was liable to be discharged at any time. Some ironworkers who were employed to do the iron work on the same ship objected to Flood being employed, upon the ground that he had previously worked at ironwork on another ship for another firm, although the ironworkers' union strongly objected to shipwrights being allowed to do ironwork. The ironworkers therefore sent for Allen, who was a delegate of their union, and explained the situation to him. Allen then went to the employers and told them that unless Flood was discharged all the ironworkers would be "called out," and that, moreover, wherever Flood was employed the ironworkers would stop work, as he had infringed their rule that no shipwright should do their kind of work. The employers, being afraid that this threat would be carried out, and their business would thus be stopped, discharged Flood, and refused to employ him again.

It appeared that if it had not been for this interference of Allen, Flood would have been given work for some time to come.

Flood then brought an action for damages against Allen, for having maliciously induced the former's employer to break his contract with him, and to agree not to enter into any new contract with him. The case went through several courts, and the opinions of many judges were obtained, before the matter was finally settled by the House of Lords.

The evidence showed that Flood had no contract with his employer; he could be dismissed at any time. However, it is also, under certain circumstances a legal wrong to induce a man not to make a contract with a particular person, and that argument was urged in this case.

But the chief point to be remembered in considering the case of Allen v. Flood is that the dismissal of the latter was not obtained because he was interfering with the work of union men; at the time he was working at his own trade (that of a shipwright), and his dismissal was demanded by the ironworkers because he had once, on some previous occasion, worked as one himself in defiance of the rules of the union. In other words, it was sought to punish Flood for his former actions.

The Points at Issue.

The majority of the Judges of the highest court of appeal came to the conclusion that the points at issue might be resolved into the following questions, which they answered in the manner stated below:—

(1) Did Allen, when he induced the employers to dismiss Flood, thereby cause them to do a legal wrong which had caused actual injury to Flood—for, if so, Allen (as well as the employers) would be liable in law for the damage so suffered by Flood. Now, as Flood had no contract of his service, his employers being at liberty to dismiss him whenever they chose, they had not been guilty of any legal wrong in doing so when they did. Allen, therefore, was not liable on that ground.

(2) But the second (and most difficult) point was raised by the contention that though otherwise Allen would not have been legally responsible for inducing Flood's employers to do that which they had a perfect right to do, yet in this instance he was so, because it was out of malice (i.e., through malicious motives—with the intention of punishing Flood, and not for the purpose of protecting his co-members of the union) that he had persuaded the employers to stop giving work to Flood. In other words, it was contended that what was otherwise perfectly legal, became illegal as soon as it was done for purely malicious reasons. The majority of the House of Lords decided that this concession was not good law, and this point is, probably, the first of the decision in Allen v. Flood.

It is to be remembered, however, that, on the other hand, if Allen had used any unlawful means to induce the employers to dismiss Flood, then he would have been liable for the damages so caused to Flood, although, of course, the employers would not have been, as they could dismiss him at any time. But the fact that Allen had been actuated by malice was not sufficient to make him responsible to Flood; he had not used any unlawful means to effect his end, and so long as he had not done that he was not legally answerable to Flood for the result.

Liability of Trade Unions.

The following account of an important decision given by the House of Lords during July of the present year, bearing on the legal status of trade unions when registered under the Trade Union Act, appears in the August number of the English Labour Gazette, the journal of the English Labour Department of the Board of Trade, England.

In connection with a dispute between the Taff Vale Railway Company and its workmen, an action was brought by the company against the Amalgamated Society of Railway Servants, a trade union registered under the Trade Union Act, and against their secretary, the claim being for an injunction and for other relief, which would include damages. The injunction asked for was to restrain the society, their servants, agents and others acting by their authority, and their officers named as co-defendants from watching or besetting, or causing to be watched or beset, the Great Western Railway station at Cardiff, or the works of the Taff Vale Company, or any of them, or the approaches thereto, or the places of residence, or any place where they might happen to be, of any workman employed by or proposing to work for that company, for the purpose of persuading or otherwise preventing persons from working for that company, or for any purpose except merely to obtain or communicate information, and from procuring any person who might have or might enter into contracts with the company

to commit a breach of such contracts. The society took out a summons to strike their names out as defendants, on the ground that they are neither a corporation nor an individual, and could not be sued in a quasi-corporate or any other capacity. The Judge of the Vacation Court refused to strike the society out of the action, and granted an interim injunction until the trial of the action, restraining the society in the manner asked for by the company, the costs to be costs in the action.

The society appealed against this decision, and the Court of Appeal allowed the appeal, with costs in that court and in the court below. The court held that nothing in the Trade Union Act made a trade union liable to be sued in its registered name, so as to enable its funds to be taken in execution, and that the action was not maintainable against a trade union. Accordingly the court ordered that the society should be struck out as defendants to the action, and that the injunction against them should be dissolved.

The company appealed to the House of Lords, which held that a trade union registered under the Trade Union Acts can be sued in its registered name and reversed the judgment of the Court of Appeal, and restored that of the Vacation Judge, ordering the society to pay costs both in the House of Lords and in the court below.

Taff Vale Railway Company v. Amalgamated Society of Railway Servants, House of Lords, July 12th, 15th, 16th and 22nd, 1901.

House of Lords Decisions

In the September number of the Labour Gazette mention was made of a decision given by the House of Lords on August 5, dismissing an appeal from the judgment of the Irish courts awarding a wholesale butcher damages against the Butchers' Assistants' Association, which brought pressure to bear on retailers to boycott him until he dismissed a certain non-union employee, threatening to call out the union employees of the firm, and finally induced non-unionists to leave the plaintiff. In anticipation of the text of the judgment in this case, a review was given of the well-known case of Allen vs. Flood, there being an impression in some quarters that the decision in the aforementioned case presented points of variance with that rendered in Allen vs. Flood. From the statements contained in the judgments, however, it appears that the facts and circumstances of the two cases are different, and that, consequently, there is no conflict between the decisions rendered.

The following account of the case of the wholesale butcher against the Butchers' Assistants' Association appears in the September number of the English Gazette, the journal of labour of the Labour Department of the Board of Trade, England:

Conspiracy to Induce Customers and Servants to Leave

In an action brought by a butcher against five assistants, of whom one was president, another treasurer, another secretary, and the remaining two ordinary members of a Journeymen's Butchers' and Assistants' Association, it was shown that the plaintiff offended the defendants by employing some men who were not members of that association, in refusing to dismiss them, and that a constant customer of the plaintiff, yielding to a threat made by the secretary of the association and the other defendants that his assistants would otherwise be called out, telegraphed to the plaintiff to cease sending him meat, and thenceforth took no meat from him. It was also proved that several of the defendants published "black lists" containing and holding up to odium not only the plaintiff's name, but also the names of persons who dealt with him; that a customer of the plaintiff, who was operated on in this mode, ceased to deal with him; and attempts were made similarly to influence certain other persons; and that certain of his servants were induced to leave his service, in two cases after giving due notice, in one case without giving notice. At the trial the jury found (1) that the defendants maliciously induced the plaintiff's customers to refuse to deal with him; (2) that the defendants maliciously conspired to induce the plaintiff's customers

and servants not to deal with him and not to continue in his employement, and that the persons so induced did leave him; and (3) that three of the defendants published a "black list" with the intention of injuring the plaintiff. The jury gave £200 damages in respect of each of the first two findings against all the defendants, and £50 in respect of the third against three of the defendants (the secretary and the two ordinary members of the association); and judgment was given accordingly.

The defendants appealed; but the appeal was dismissed, except that the damages were disallowed in respect of the third finding of the jury (in regard to the "black list.")

One of the defendants (the treasurer of the association) appealed to the House of Lords, which dismissed the appeal with costs, holding that, upon the facts proved in the case, the plaintiff had a right of action against the defendants for damages, sustained in consequence of the conduct of the defendants. Quinn vs. Leatham, House of Lords, May 14, 17 and 20, June 11 and 13, and August 5.

Comparison with Allen vs. Flood.

The following extracts from the judgment rendered in the case of Quinn vs. Leathem will serve to make clear the points of distinction between that case and the facts of the case of Allen vs. Flood.

The Lord Chancellor in his judgment said:—

The hypothesis of fact upon which "Allen vs. Flood" was decided by a majority in this House was that the defendants there neither uttered nor carried into effect any threat at all. They simply warned he plaintiff's employer of what the men themselves without his persuasion or influence had themselves determined to do, and it was certainly proved that no resolution of the trade union had been arrived at, and that the trade union official had no authority himself to call out the men, which in that case was argued to be the threat which coerced the employers to discharge the plaintiff. It was further an element on the decision that there was no case of conspiracy or even combination. What was alleged to be done was only the independent and single action of the defendant, actuated in what he did by the desire to express his own views in favor of his fellow members now in this case (i.e. Quinn vs. Leatham), it cannot be denied that if the verdict stands, there was conspiracy and threats, carried into execution so that loss of business and interference with the plaintiff's legal rights are abundantly proved."

Lord Lindley, in the course of his judgment, after examining the exact force and meaning of "Allen vs. Flood," said:—

"This decision, as I understand it, establishes two propositions, one a far-reaching and extremely important proposition of law, and the other a comparatively unimportant proposition of mixed law and fact, useful as a guide, but of a very different character from the first. The first and important proposition is that an act otherwise lawful, although harmful, does not become actionable by being done maliciously in the sense of proceeding from a bad motive, and with intent to annoy or harm any one. This is a legal doctrine not new or laid down for the first time in "Allen vs. Flood"; it has been gaining ground for some time, but it was never before so fully and authoritatively expounded as in that case. In applying this proposition, however, care must be taken to bear in mind, first, that in "Allen vs. Flood" criminal responsibility had not to be considered. It would revolutionize criminal law to say that the criminal responsibility for conduct never depends on intention. Secondly, it must be borne in mind that even in considering a person's liability to civil proceedings the proposition in question only applies to "acts otherwise lawful," i.e., to acts involving no breach of duty, or, in other words, no wrong to any one. The second proposition is that what Allen did infringed no right of the plaintiff's, even although he acted maliciously and with a view to injure them. Truly, to inform a person, that others, not under the control of the informant, will annoy or injure him unless he acts in a particular way, cannot of itself be actionable whatever the motive or intention of the informant may have been."

Liability of Trade Union Funds.

In the case of the Taff Vale Railway Co. vs. the Amalgamated Society of Railway Servants (referred to in the September number of the Labour Gazette at p. 181), the House of Lords held that a registered trade union could be sued in its registered name so as to make its funds liable to be taken in execution for any damages which might be recovered.

Another English decision may be considered in connection with the above case. In Linaker vs. Pilcher and others, three of the defendants were registered as the proprietors of a newspaper, the Railway Review, which was published to protect the interests of the Amalgamated Society of Railway Servants, of which organization the three defendants referred to were the trustees. The Railway Review published an article imputing drunkenness to the plaintiff Linaker, and in an action for libel the latter was awarded £1,000 damages. The question then arose whether the funds of the Amalgamated Society (the real owner of the publication) could be taken for the payment of the damages and costs, and the court decided that they could. (Linaker vs. Pilcher et al., decision of the Court of King's Bench, February, 1901).

Co-Operation in Great Britain.

The Report of Workmen's Co-operative Societies in the United Kingdom, Board of Trade (Labor Department), 1901, gives a detailed statistical history of co-operative societies operated by workmen in Great Britain; also the work of various other classes of co-operative societies.

H. Llewellyn Smith, in his letter of transmittal, says:—The progress made by co-operation in the United Kingdom in recent years has been continuous and remarkable. Between 1874 and 1899 the recorded membership of all classes of co-operative societies increased from 403,010 to 1,681,342. The per centage which co-operatives formed of the population of the United Kingdom rising from 1.2 to 4.1. The increase of the value of the total yearly transactions of these societies has been still more rapid than that of their membership. The aggregate business for 1874 being valued at about fifteen million sterling, while that for 1899 amounted to over 68 millions, exclusive of the banking transactions of the English Wholesale Society. The majority of co-operative societies (1,446 out of 1,858) are associations established primarily for retail distribution, and these embrace more than nine-tenths of co-operative societies, as stated above. The value, however, of the commodities produced by co-operative societies of various classes is very considerable, amounting in 1899 to nearly eleven millions sterling, of which rather more than a third is produced by the workshops attached to societies for retail distribution, a third by the "wholesale" societies by which the retail stores are largely supplied, and the remainder by independent societies established expressly for production, including under the last heading the corn milling societies, the output of which was valued in 1899 at over a million sterling. It is interesting to note the progress made by co-operative societies established primarily for production since 1882, the first year for which figures are given in the tables appended to the present report. Excluding corn mills, returns for 1882 are available for sixteen such societies, with sales amounting to £137,848, while in 1899 the number of societies was 259, with sales valued at £2,191,785. Over four-fifths of this production is accounted for by the following trades, in order of importance: dairying, baking, textile, boots and shoes, and printing. Most societies of this class allot a share of profits to their employees.

The English and Scottish "Wholesale" Societies are federations of retail societies for supplying themselves with goods for sale to their members. Full details are given in the report as to the operations and progress of these societies.

Among other features of the report to which attention is called are the accounts given of various minor operations carried on by the retail and wholesale co-operative societies, e.g., the provision of dwellings for their members, insurance, banking, etc., as

well as the work of various classes of societies, such as building societies and labor loan societies, which partake more or less of a co-operative character.

M. J. J. Dent, Labor Correspondent of the Board of Trade, in the opening pages of the report says (in part) as follows:—

Distinguishing Features of a Workmen's Co-Operative Society.

(1.) Membership open to all, subject only to veto of committee in objectionable cases; share list never closed.

(2.) Shares are issued at par value, usually £1, payable in small weekly or quarterly instalments aided by automatic accumulations of profits accruing to the holder.

(3.) Share capital is withdrawable at short notice, generally. Some of the societies, however, compel members to hold at least one transferable share, which can be realized only by sale.

(4.) In all the societies, almost without exception, each member has but one vote, irrespective of the number of shares held.

(5.) Proxy voting is almost unknown in these societies.

(6.) The interest on share capital is in most cases limited to a fixed rate of interest (usually 5 per cent. per annum). The surplus profits remaining after the payment of the fixed rate of interest on share capital are distributed in certain agreed proportions, in some cases between the customers of the society, in others between the customers and employees, in others, again, between customers, employees and shareholders; but in no case do the shareholders receive in right of their capital the whole of the profit.

(7.) Publicity of accounts is a universal feature.

(8.) The societies are, with few exceptions, formed under laws specially passed to meet the requirements of the industrial classes. The associations vary in size from the Leeds Industrial, with its membership of 48,000, its capital of £733,644, and its annual sales of £1,473,702, down to the Society of Forth, in Scotland, which has ten members, but possesses no capital, whether share or loan, the ten members sending a periodical order for goods to the Scottish Wholesale Society, to be delivered at the house of one of their number. The total capital of these societies at the end of 1899 amounted to £22,282,473, of which £18,925,270 was share capital, £2,516,691 loans and deposits, and £840,512 reserve and insurance funds.

The Act under which they are incorporated prohibits any one member from holding shares to a nominal value exceeding £200. In many cases the capital has increased beyond the society's requirements, in which cases the amount of share capital to be held by any one member is limited to £100 or less, and in some instances to £10.

In many cases members who have already paid up their shares in full voluntarily allow the interest on their shares and the dividend on their purchases to be regularly added to their share account; and in this manner, by the accumulation of dividends and compound interest, they have acquired the full limit of share capital permitted by the acts, or by the rules of the society, and when this limit has been reached, the money, as it becomes due, is credited as loan capital advanced by them to the society. It is this process of transfer of interest and dividends to share and loan capital that has led to the large accumulations of capital in the retail distributive societies, and has given them the character of an automatic savings bank, in which a member's capital is constantly increasing without any actual investment being made by him directly out of his ordinary income.

The account books of almost every old-established society would show numerous instances of members who, having invested in cash only one or two shillings, and having in the course of a number of years withdrawn many pounds sterling, still have a substantial balance standing to their credit.

As already stated, the societies as a whole possess considerably more capital than is required for their present business, and frequent conferences are held in various parts of the country to discuss the best method of utilizing the surplus. At the end of

1899 a total of £9,850,140 was invested by retail distributive societies otherwise than in their own business. Of this amount £3,816,087 was re-invested in other co-operative societies, including the Wholesale Societies, the Corn Mills and other productive societies, while £4,465,041 was invested in house property, partly let to members and partly held on mortgage as security for advances made to members, the balance being invested in various cotton spinning, railway and canal undertakings, and other concerns.

Sales and Sources of Supply.

The total sales in 1899 of the 1,429 retail distributive societies in Great Britain amounted to £44,985,490, upon which, after allowing for all expenses, but no interest on shares, there remained a profit of £7,021,534. If to this profit we add the trade expenses, amounting to £3,276,714, we get the gross profits, and deducting these gross profits from the sales, as given above, we get £34,687,242 as the wholesale value of the goods sold in the year. The Annual Report of the Co-operative Union for 1900 shows that the purchase of 887 societies from co-operative sources (the wholesale societies, the corn mills and other co-operative manufacturing societies) in 1899 amounted to £16,022,315; assuming that the remaining societies, which made no returns, purchased from co-operative sources in the same proportion, we get the total of about $19,500,000; and if to this we add the further sum of £3,906,385, the value of the goods produced by the retail societies themselves, we obtain a total of £23,500,000, as the value of goods produced or purchased from co-operative sources. Thus, to the extent of some 68 per cent. of their business, these societies, carrying out the intentions with which they were formed, are engaged in distributing articles obtained from co-operative sources, and to this extent they are able to exercise some degree of control over the industrial conditions under which these goods have been produced. Of the retail distributive societies, 1,369, comprising 88 per cent. of the total membership of societies of this class, were at the end of 1899 members of the wholesale federations, and obtained from these organizations the whole or part of the goods with which they supply the requirements of their customers.

There are still, however, some societies which prefer to obtain the whole of their supplies in the open market, a circumstance for which various causes are assigned, and which forms a constant subject for discussion at gatherings of working men co-operators.

Distribution of Profits.

Goods are sold to the general public at the same prices as to members. Every customer being given at the time of purchase a metal or other token representing the value of his purchase. These tokens are returned at the end of the quarter or half year, when they are accepted as evidence of the amount of the purchases from the society made by the persons presenting them, and form the basis of calculation in ascertaining the sum due to him as his share in the profits of the society. The average rate of dividend to members has for several years past been about two shillings and eight pence in the pound. This dividend is usually paid out in cash, except as to the dividends of a member in arrears with the instalments upon his shares, in which case the whole or part of the dividend is placed to the credit of the members' share account.

It is the practice to sell goods at ordinary market prices of the district. The surplus profits are distributed to the purchasers, many of them thus being enabled to save considerable money who otherwise would not have done so. Even had they obtained their goods at reduced prices at time of purchase.

The report says:—There is some ground for the belief that in districts where competition is not severe, or where, as in some of the mining districts, the co-operators have almost monopolized the trading of the district, the value of the dividend system

in encouraging saving has led committees of societies to keep selling prices at a level unnecessarily high, in order to increase the dividend, much of which experience has shown will be capitalized by the members. Much discussion as to the policy of high dividends has taken place during the past year or two, and in one or two instances societies have announced their intention of lowering prices. It is urged that the lowering of prices will bring into the societies the poorer classes, who, as yet, are largely outside of them, and who, as they cannot afford to wait for a prospective dividend, are led to purchase what they require at the lowest prices for which the goods may be obtained in the ordinary shops. In this connection a further proposal, also being actively discussed at the present time by co-operators, is that the larger and stronger societies shall open in the very poor localities in their districts, branch stores, at which goods shall be sold at a very small margin over cost prices, plus expenses, and that dividend shall be paid to customers at such branches at a lower rate than that allotted to customers at the other shops of the society.

During 1899 £21,471 was distributed in charity, £6,566 subscribed to the co-operative union for propagandist organization and defensive purposes, and £56,158 were devoted to educational purposes. 500 societies had at the end of 1898 established "penny banks" for the encouragement of saving, especially among the children of members, the total amount to the credit of depositors in these banks at the end of 1898 being upwads of £500,000. Interest at the rate of 4 1-6 per cent. per annum is usually credited to depositors.

Credit by Societies

Ready money trading has always been held up as an important principle among co-operators, and the rules of many societies expressly prohibit credit. Returns published in recent years, however, prove that there has been considerable departure from this principle, the report of the Co-operative Union for 1899 stating that no less than 928 retail distributive societies in Great Britain gave credit for some period, or to some limit of amount (in some cases to the extent of a certain proportion of the share capital held by the customer). Efforts are being made by some of the leading co-operators to induce the societies to abandon altogether the practice of allowing credit. But there seems to be some difficulty in doing this, and the total amount owing by customers to retail distributive societies is stated by the co-operative union to have risen from £398,340 for 776 societies at the end of 1895, to £576,913 for 928 societies at the end of 1899. It should be stated, however, that the rules of co-operative societies usually give the society a lien upon a member's share capital for debts due by such members to the society, and that to this extent the societies are secured against loss by bad debts.

Wholesale Co-Operative Societies.

The English and Scottish Wholesale Societies are federations (mainly of retail distributive societies) formed for the purpose of enabling co-operators to make their purchases in an advantageous manner, avoiding competition among themselves in the open markets, and to overcome the difficulties caused especially in the early days of the co-operative movement, by the opposition of the private traders, who brought pressure to bear upon the wholesale merchants to prevent the supply of goods to co-operative societies. It was also seen that federations with a large trade, besides ,in many cases, purchasing directly from the producer might eventually set up workshops to produce for themselves the goods required for their members. Previous attempts to form wholesale societies had been made in Liverpool in 1832 by the Owenite Co-operative Societies, and in 1850 by the Christian Socialists in London, but both had failed after a short period, mainly owing to the state of the law which gave the societies little or no control over the working of the experiments. A further attempt in the same direction was made in 1855 by the "Rochdale Pioneers' Society," which established a wholesale department for the supply at wholesale prices to the neighboring societies, and this also, from various causes, failed after a brief existence.

The societies then commenced an active agitation for such an alteration in the law as would enable them to establish, and effectively control, federations for their common benefit. The Industrial and Provident Societies Act of 1862 gave this power and resulted in the establishment of the present English Wholesale Society in 1863, and of the Scottish Wholesale Society in 1868. The two societies render considerable assistance to each other, and in certain departments have joined buyers and depots, of which they share the expenses and management.

At the present time arrangements are in progress for creating a legal partnership between the two societies for the purpose of carrying on certain businesses in common.

Capital and Sales.

The following table will show the progress of the two societies. The English Society commenced business in 1864; the Scottish Society in 1868 :—

Year.	Number of Federated Societies.	Capital (share, loan, reserve and Insurance.)	Sales.
English Wholesale Society.			
		£	£
1870	209	44,164	677,734
1880	604	565,854	3,339,681
1890	941	1,474,466	7,429,073
1900	1,078	3,187,945	16,043,889
Scottish Wholesale Society.			
		£	£
1870	103	12,543	105,250
1880	161	110,179	845,222
1890	260	575,322	2,475,601
1900	288	1,676,765	5,463,631

Most of the business of the wholesale societies is conducted in premises owned by them; the English Society had at the end of 1900 expended a total of £1,980,303 in land and buildings, and the Scottish Society £847,129. The English Society owns in its shipping department seven steamships, acquired at a total cost of £82,778, the whole of which has been written off by depreciation.

Both societies have established workshops for the manufacture of various articles required by the members.

The societies carry on jointly numerous purchasing depots in foreign countries, the value of the foreign produce imported direct by the English Society in 1900 amounted to £4,818,310. In the same year it purchased goods from co-operative productive societies in the United Kingdom to the value of £178,607. They also own 741 acres in Shropshire, part of which they cultivate, growing fruit and other produce for its jam factory and distributive departments, and part is let to tenant farmers. At a recent meeting of the society it was decided to convert a mansion and grounds, which form part of the estate, into a convalescent home for members of co-operative societies, holding shares in the society.

The Scottish Society also rents a farm of 280 acres, which it uses for raising live stock for its own use and for sale to its members.

For the year 1899 returns from 616 societies, employing 13,810 in their productive departments, give a total output of £3,906,385, or 36 per cent. of the total production of co-operators in the United Kingdom, the goods so produced being transfered to the distributive departments of the societies.

Rates of wages and hours of labor of employees of these societies are usually those prevailing in their district, in addition to which profit-sharing to some extent prevails. The 616 societies making returns gave a share of profits in 1899 to their productive em-

ployees amounting to £3,717, being an average of 6.7 per cent. upon the wages paid by them.

The following table will show progress in production in the past three decades:—

Year.	English Society.		Scottish Society.		Totals.	Both Societies.
	No. of productive employees.	Value of productions.	No. of productive employees.	Value of productions.	No. of productive employees.	Value of productions.
		£		£		£
1880	680	118,604	...	...	680	118,604
1890	1,969	341,277	1,024	119,627	2,993	460,904
1900	7,462	2,718,434	4,669	1,446,596	12,131	4, 65,030

Workman's Corn Mill Societies

This class consists of eight corn mill societies, which, like the retail and wholesale societies, are worked in the interest of the consumers. The total sales in 1900 amounted to £1,226,995. Two societies, with sales amounting to £178,167 are purely federations; one of ten, and the other of forty, retail distributive societies, of the remaining six, two with sales amounting to £25,350, consist wholly of individuals, and four, with total sales of £1,023,478, have a mixed membership consisting of 363 retail societies and 4,567 individuals. The greater part of the profit of these mills, after paying a fixed rate of interest on share capital, is returned to the customers as a dividend upon purchases in the same manner as is done by the wholesale and retail distributive societies.

Co-Operation in Ireland.

The co-operative movement in Ireland is almost entirely a growth of the past twelve years.

In 1888 there were only ten workmen's co-operative societies at work in Ireland, these being retail distributive societies, doing a total trade in that year of £34,273. In the autumn of 1888 a largely-attended conference of co-operators was held at the Irish Exhibition in London, under the Presidency of the Earl of Aberdeen, to consider the subject of co-operation as a means of improving the condition of "Irish Industries," papers upon that subject being read by Mr. Benjamin Jones and Mr. R. B. O'Callaghan. As the outcome of the discussion a committee was appointed "to endeavor to carry the system of co-operation into practical operation among the Irish agricultural and industrial classes." The result of the propoganda thus initiated at the end of 1899 shows the following results:—

Description of Society.	Number.	Sales in 1899. £
Production—		
Dairying Societies	123	615,026
Miscellaneous Societies	4	3,638
Distribution—		
Retail Distributive Societies	17	61,956
Agricultural Societies	74	62,652
Poultry Societies	6	3,261
Home Industries, etc., Societies	5	3,438
Irish Agricultural Wholesale Societies	1	36,697
Irish Co-operative Agency Society	1	159,209
Total production and distribution	231	945,877
Credit Banks	42	5,720
Total Societies and Business	273	951,597

In addition to the 273 societies reported there were 115 who had either not commenced business or failed to make returns, so that the total number of societies at the end of 1899 was 388.

The Provision of Dwellings by Workmen's Co-Operative Societies

A strong opinion has grown up in recent years among co-operators that they should use their organization and capital to secure better housing for their members. Much difference of opinion exists upon the question of collective ownership by members. Numerous conferences have during the past two years declared themselves in favor of the societies retaining the ownership and letting to their members. The number of societies investing their surplus capital in dwelling houses is rapidly increasing. Encouragement to investment by societies in houses was recently given by the action of the English Co-operative Wholesale Society, which prepared a scheme under which it was willing to advance capital to its federated societies at 3½ per cent. upon the security of the title deeds of house property purchased or built by the societies for selling or letting to their members.

Many Societies have, as a consequence, prepared schemes for giving to their members the advantage of the Wholesale Society's offer.

Returns collected by the Co-operative Union show that up to the end of 1899 two hundred and twenty-four co-operative societies making returns, had expended a total of £5,147,526 in the provision of dwelling houses for their members. Of this amount £917,397 has been expended by 179 societies in building 4,247 houses, of the average value of £216, all of which are owned by the societies and let to members. Eighty-nine societies have expended £827,823 upon the building of 3,709 houses, of the average value of £223, which have been sold to members, and 139 societies have advanced £3,402,306 upon 16,082 houses, which have been built or purchased by members, the average amount lent per house being £211 10s. Ten societies advance up to 95 per cent. of the value of the houses mortgaged, 59 societies up to 90 per cent., and the remainder up from 50 to 92½ per cent.

The rate of interest charged for advances by 34 per cent. of the societies is 4 per cent., by 27 per cent. of the societies, 5 per cent., the remainder at various rates, none of which reach 5 per cent.

With few exceptions the terms of repayment of advances range from two shillings to five shillings per week per one hundred pounds advanced.

Propagandist Organizations.

There are seven central organizations for purposes of propaganda and organization, and the defence of co-operative interests. These are: The Co-operative Union, Long Millgate, Manchester, formed in 1869, and at the end of 1900 comprised 1,108 co-operative societies, with a total membership of 1,620,185. No society can be admitted as a member of the union unless the management is of a representative character, nor unless it accepts the following as the principles by which all its business transactions should be guided—the desire to promote the practise of truthfulness, justice and economy, in production and exchange.

(1.) By the abolition of all false dealing, either: (a) Direct—by representing any article produced or sold to be other than what is known to the producer or vendor to be, or, (b) indirect, by concealing from the purchaser any fact known to the vendor, material to be known by the purchaser to enable him to judge of the value of the article purchased.

(2.) By conciliating the conflicting interests of the capitalist, the worker and the purchaser through an equitable division among them of the fund commonly known as "profit."

(3.) By preventing the waste of labor now caused by unregulated competition.

The union is governed by an annual congress, composed of representatives from the societies connected therewith. The Executive is divided into sections and district

committees, responsible to the union to carry on its work in their respective districts. It provides speakers for propagandist work, gives free legal advice to the members and advice as to all the details of management of a co-operative society, and acts generally as the representative of the interests of co-operative societies. It has established two scholarships at the University of Oxford in the names of EDWARD VANSITTART NEALE, late General Secretary to the union, and THOMAS HUGHES. These scholarships are open to the sons of members of the co-operative societies which subscribe to testimonials to these two workers in the movement.

Considerable attention has been given during recent years to the guidance of societies, to expend their grants not only in teaching the history and principles of co-operation, but in teaching the duties of citizenship in its various aspects. In connection with the union a joint committee of trade unionists and co-operators has been formed, consisting of four co-operators, elected by the Central Board, and four Trade Unionists elected by the Parliamentary Committee of the Trade Union Congress. The purpose of this joint committee is to arbitrate upon any dispute which may arise between co-operative societies and their employees.

The other six organizations are :—

Labour Association, 15 Southampton Road, London, W. C.
Co-operative Production Federation, 39 Cambridge Street, Leicester.
International Co-operative Alliance, 15 Southampton Road, London, W.C.
Irish Agricultural Organization Society, 22 Lincoln Place, Dublin.
Women's Co-operative Guild, Kirby, Lonsdale, Westmoreland.
Scottish Co-operative Womens' Guild, 1 Orwell Terrace, Edinburgh.

All of these work more or less on the general principles which govern the Co-operative Union.

CO-OPERATIVE SYSTEM OF CONSTRUCTING PUBLIC WORKS IN NEW ZEALAND.

By H. J. H. Blow, Under-Secretary for Public Works

The great bulk of our railway and road works and much of our building-work in New Zealand is now carried out under what is known as the co-operative system, an arrangement which has only been brought into operation within the last three years or so.

The contract system had many disadvantdages. It gave rise to a class of middlemen, in the shape of contractors, who often made large profits out of their undertakings, and at times behaved with less liberality to their workmen than might have been expected under the circumstances. Even in New Zealand, where the labor problem is less acute than in older countries, strikes have occurred in connection with public-works contracts, with the result that valuable time has been lost in the prosecution of the works, much capital has been wasted by works being kept at a standstill and valuable plant lying idle, and large numbers of men being for some time unemployed ; and considerable bitterness of feeling has often been engendered. The contract system also gave rise to sub-contracting, which is worse again ; for not only is it subject to all the drawbacks of the parent system, but by relegating the conduct of the works to contractors of inferior standing, with little or no capital, the evil of "sweating" was admitted. Very often too the business people who supplied stores and materials were unable to obtain payment for them, and not seldom the workmen also failed to receive the full amount of their wages. The result in such cases was that, instead of the expenditure proving a great boon to the district in which the works were situated, as would have been the case if the contract had been well managed, and properly carried out, such contracts frequently brought disaster in their train. The anomaly of the principal contractor making a large profit, his sub-contractor being ruined, and his workmen left unpaid also occasionally presented itself, and thus the taxpayer who provided the money had the mortification

or seeing one man made rich (who would perhaps take his riches to Europe or America to enjoy them) and a number of others reduced to poverty, or in some instances cast upon public charity.

Contracting also sometimes led to congestion of the labor market in the very districts where works were in progress. When large undertakings were advertised for tender, workmen out of employment naturally gravitated to the districts where such works were to be constructed, in the hope of obtaining employment upon them when operations were commenced. But if the successful tenderer happened to be a contractor residing in some other part of the colony, who already possessed a good staff of workmen, or knew where to find reliable men who had worked for him before, he generally took his men with him, so that instead of the works being a relief to the local labor market they would have quite the reverse effect.

The co-operative system was designed to overcome these evils, and to enable the work to be let direct to the workmen, so that they should be able not only to earn a fair day's wage for a fair day's work, but also to secure for themselves the profits which a contractor would otherwise have made on the undertaking.

It also places the workman on a much higher plane and enables him to comprehend more fully the dignity of labor. Under the co-operative system every workman is a contractor, and has a personal interest in the economical and successful carrying out of the work. He is also his own master.

Not only does the system offer these solid and very real advantages to the workmen, but it also offers substantial advantages to the State. Under this system works are carried out for their actual value—no more and no less.

The work is valued by the engineer appointed to have charge of it before it is commenced, and his valuations are submitted to the Engineer-in-Chief of the colony for approval. When approved they constitute the contract price for the work; but they are not absolutely unchangeable, as in the case of a binding, strictly legal contract. It frequently happens under an ordinary contract that works turns out to be more easy of execution than was anticipated, and the State has to see its contractors making inordinate profits. Sometimes, on the other hand, works cost more than expected; but in most cases of this kind the contractor either becomes bankrupt, so that the state has, after all, to pay full value for the work, or, if the contractor happens to be a moneyed man, he will probably find some means of getting relieved of his contract, or of obtaining special consideration for his losses on completion of his work. Under the co-operative system, if it is found that the workmen are earning unusually high rates, their contracts can be determined, and be relet at lower rates, either to the same party of men or to others, as may be necessary. Similarly, if it is shown, after a fair trial of any work, that capable workmen are not able to earn reasonable rates upon it, the prices paid can, with the approval of the Engineer-in-Chief, be increased, so long as the department is satisfied that the work is not costing more than it would have cost if let by contract at ordinary fair paying prices.

An illustration in support of the contention that contractors sometimes make unreasonable and quite unexpected profits occurred on one of the railway works recently. After very careful inquiries in the neighborhood, and also after prospecting all the likely places thoroughly, the conclusion was come to that no suitable and easily obtainable material was available for ballasting the eight miles extension of the Whangarei-Kamo Railway to Hikurangi. It was therefore determined to ballast it with broken metal, the stone for breaking being taken from an extensive limestone deposit at one end of the line. No contractor would have prospected the district more thoroughly than the Government engineers did, and so, if the work had been tendered for, all the tenderers would doubtless have allowed for ballasting with broken metal, every yard of which would have cost at least 2s. 6d. After the formation works had been in hand for more than a year, however, and just as platelaying was about to be begun, an extensive deposit of very suitable scoria-ash was discovered quite accidentally and quite unexpectedly. The deposit was situated so con-

veniently to the line that the ballast only cost about 6d. per yard, delivered on the railway; hence the saving to the Government by this fortunate discovery will not be less than £2,000. Under the co-operative contract this money will be absolutely saved to the taxpayers of the colony, whereas, under the old contract system, it would have all gone into the pockets of the lucky contractor.

Another great advantage of co-operation is that it gives the Government complete control over its expendiure. Under hte old plan when large contracts were entered into the expenditure thereunder was bound to go on, even though, through sudden depression or other unlooked-for shrinking of the revenue, the Government would gladly have avoided or postponed the outlay. To propose a postponement of the works, however, would only be to invite claims for compensation from the contractor—possibly entailing a loss to the State fully as large as any loss that could accrue from going on with the works in the face of an unfavorable money market. Under the co-operative method the works can be proceeded with more leisurely, or discontinued altogether, by simply giving a week's notice to the men.

Not only has the Government complete control over the expenditure, but in the matter of the time within which works are to be completed the control is much superior to that possessed when the works are in the hands of a contractor. When once a given time is allowed to a contractor in which to complete a work any request to finish it in less time would at once provoke a demand for extra payment; but under the co-operative system the Government reserves the right to increase the numbers employed in any party to any extent considered desirable, so that if any sudden emergency arises, or an unusually rapid development in any district takes place, it is quite easy to arrange for the maximum number possible of men being employed on the works in hand, with no more loss of time than is required to get the men together.

Work also is better done under the co-operative than under the contract system. Under the former method the Government finds its own materials, which are carefully selected to insure their being of the best class; and the workmen, therefore, have no interest in stinting the use of material to try to effect savings, while the Government overseers, of course, see that there is no waste. No attempts are now made to put whiting into the paint, instead of white lead, or to introduce inferior brands of cement or iron into the works, and no walls are built dry in the centre, or filled in with bats, as it is easier for the men to construct the work of sound materials than with rubbish. All stores are purchased by the Government's own officers, and are supplied to the co-operative contractors from the Government store, so that the department knows exactly what class of materials is used. The workmanship put in is also of a superior kind. The men are the contractors themselves; they take a pride in their work, and have no taskmaster standing over them, finding fault with them for being too particular and taking too much pains. All the work done under the co-operative system will bear comparison with any similar work done by contract, and will generally show to advantage.

The system was first tried in connection with formation works on roads and railways, including small bridges and culverts, and other similar works, but it has now been extended to the erection of iron bridges (the ironwork being supplied and delivered at the sites of the bridges by the department), the supply of sleepers, the laying of the permanent way, the construction of timber bridges up to £2,000 in value, and of masonry abutments and piers for bridges, and the erection of stations and other public buildings, etc.

The first work to be carried out under the co-operative system was the formation of certain sections of the Ngakawau-Mokihinui Coal Railway. Some portions of this line had been let by contract in the ordinary way, and the contracts thrown up as unremunerative, when, as a large number of men were in need of employment in the district, it was decided to let the work to them on the co-operative principle. They were asked to arrange themselves into parties of about fifty each, and to select certain persons to act as trustees under regular deeds of trust, the trustees

to take the work from the Government at the amount of the Engineer's estimate, but all the men to have an equal interest therein, and the wages and profits to be divided equally. The plan worked well from the start; but further experience with it has shown the advisableness of modifying some of the details. For example: The parties are smaller now, and no trustees are insisted upon. It was found difficult in practice to get fifty or sixty men to work harmoniously together, owing to differences not only in the temperament of the men, but also in their abilities as workmen. The parties now for the most part do not exceed ten or twelve men, and they probably do not average much over six. Then, instead of trustees, acting under regular deeds of trust, there now are merely two "headmen," and if the party prefers it (as they sometimes do) only one "headman."

The method followed in letting and carrying out the work is somewnat as follows: When a length of railway is to be constructed on the co-operative principle the formation work is divided into sections of suitable size. Where the work is heavy one cutting and one embankment will be sufficient for a party, but in lighter works sometimes as much as half a mile, or even a mile, of formation may be intrusted to one set of men. Plans and sections of the work are prepared, and a brief and simple specification provided. The Engineer who is to have charge of the work then carefully computes the quantities of the several classes of excavation and other work requiring to be done, assesses the value of the same, and forwards his estimates to the head office, where they are submitted to the Engineer-in-Chief for an expression of opinion as to their reasonableness or otherwise. The rates are based on the current rate of wages ruling in the district for similar work, with a small percentage added to represent in some degree the profits which a contractor would have made had the work been let by tender in the ordinary way. That is, the price fixed should enable a first-class workman to earn an average wage per day of eight hours slightly in excess of what a contractor would pay him for the same work, while workmen of less strength and ability would earn proportionately less. There is, however, an understood proviso that the work shall not cost more than if let by contract at fair rates, and experience has generally given favorable results in this respect. When the prices have been approved by the Engineer-in-Chief, they constitute the basis of the contract with the men, the contract being a "schedule rate," and not a "lump sum" one. The Engineer's estimate of the quantities is not, however, binding on either the Government or the men, the work done being measured monthly, and the actual quantity executed paid for. The men go to work at these prices, finding their own picks and shovels, but all plant of an expensive character, such as trucks, rails, barrows, etc., is supplied by the Government, the price allowed for the work being, of course, largely dependent on the class of plant supplied for performing it. Then men are also furnished with tents in the first instance, but they are required to keep them in repair, or to be at the cost of supplying new ones when the old ones become worn out or unserviceable. If horses or drays are required the men make their own arrangements for procuring them, as there is never any difficulty in hiring them from settlers living in the neighborhood. The men provide their own explosives, or requisition for them on the Government store, in which case they are charged a small percentage over the actual cost to the Government, the sum being deducted at the end of the month from the sum payable under the contract. Separate contracts are let for bushfelling and clearing, fencing, construction of culverts, etc.

A very similar procedure is adopted with regard to other works. If the contract is to be for the erection of a timber bridge, the department first takes out the detail quantities of all timber and ironwork required, and obtains tenders for the supply of the same, and arranges for delivery on the ground. The value of the labor required in the erection of the structure is then carefully assessed and submitted for the approval of the Engineer-in-Chief, as in the case of earthwork contracts; the number of men required to carry out the work properly and economically is determined upon, and a contract let accordingly. The same is done with ma-

sonry work, except that the excavations of the foundations and the cutting of the inlets and outfalls is usually let to one party and the actual masonry work to another, so as to avoid having to include laborers and mechanics in the same party. When the line is ready for the laying of the permanent way the department first supplies all the rails, fastenings, points and crossings and sleepers necessary for the work, and then arranges contracts as follows :—(1) For notching and boring the sleepers. (2) For getting and filling ballast into trucks. (3) For laying the permanent way, including linking-in, spreading the ballast when tipped on the road from ballast-waggons, lifting and packing, and final lifting and straightening. The department supplies its own engine and waggons, and does the hauling for the men.

In the erection of buildings separate contracts are let for each trade employed. First, a contract to a party of laborers for levelling or otherwise preparing the site : then another contract to a party of bricklayers for all brickwork required; still another contract to a party of carpenters and joiners for the woodwork; and another to a party for the plumbing work; and another for the painting, and so on, the Government finding all materials in each case.

The work done is measured monthly, and payments made to the headmen of parties in cash, and to the full value of the work done, no percentage or "reserve" being retained, the headmen being left to pay whatever debts may have been contracted by the party, and to divide the balance equally among all the members thereof.

The department does not guarantee payment to storekeepers supplying the men with goods and provisions, but, with the view of assisting them in the collection of their accounts, the Engineers are instructed to notify storekeepers known to be supplying goods to the men of the dates on, and places at which, payments are to be made, and generally to assist the storekeepers in obtaining payment of their accounts; and, whenever any storekeeper intimates his intention of taking proceedings against a party, the Engineer will withhold payment for a few days to enable the storekeeper to obtain an order of the Court attaching the moneys due, or so much thereof as may be owing to him.

As it often happens that men are working at a distance from where their families live, the Government Paymaster is instructed to offer his services in conveying remittances to the nearest money-order office for transmission to their wives, or for deposit in the Postoffice Savings Bank; and any men not remitting to their families, but allowing them to become a charge upon public charity, are dismissed from the works.

Should any of the men desire to leave the works no impediment is placed in the way of their doing so. On the occasion of any monthly pay they can resign from their party and leave immediately, their places being filled by other men obtained by the Engineer through the Government Labor Bureau. A change can also be made in the headman or headmen of the party, either by the Engineer in charge of the works or by a majority of the workmen comprising the party. The Engineer, if he considers a change necessary in the interests of the work, is empowered to depose the headmen, and to call upon the party to elect others in their place; and the workmen, in their turn, are also entitled to depose the headmen and elect others, provided that a majority of the party agree upon such a course, and forwards notice in writing to the Engineer of such having been done. The Engineer is authorized also to discharge a man or any number of men from a party for any reason that he may consider sufficient, and is responsible to the department only for such action.

The Engineers see that the men make due and satisfactory progress with their work, and if the progress is not satisfactory they can either determine the contract altogether, and relet it to another party, or they can draft additional men into the party, as they may think best. They also see that the men do not make unduly high wages by working extra hours, the regulation hours not exceeding forty-eight per week.

All men employed on Government co-operative works are selected by the Government Labor Bureau, and in selecting them the following rules apply :—

(1) Applicants not previously employed on Government co-operative works have priority of claim over men who have recently been so employed.

(2) Men resident in the neighborhood of the works have priority over non-residents.

(3) Married men have priority over single men.

(4) In recording the applications of men who have previously been employed on Government co-operative works, the dates when they left such works are noted, and those longest off such works are considered first.

(5) All applicants for work must have been at least one week out of employment before they can apply, and all men previously employed on Government co-operative works must have been at least fourteen days off such works prior to re-registration as applicants for further work.

(6.) If there are more applicants for work than there are vacancies to fill, a ballot is taken to determine the particular men to be employed. Such ballots are conducted in the presence of the men interested, and members of local bodies in the district may also be present if they wish.

The qualifications of the men as workmen, and their personal characters, are also, of course, taken into consideration.

All parties of men when they finish their contracts are discharged, and are not again employed except under the above-mentioned rules.

It sometimes happens, of course, that men who are not up to the standard which a contractor would require are selected for employment on the works; but it is claimed as one of the advantages of the system that men of all capacities can be employed under it, since payments are made according to results, so that the men get just what they earn, whether the amount be great or small.

If men are sent to work at a distance too great for them to walk their railway or coach fares are paid by the Government on their signing an order authorizing the amount thereof to be deducted from their first month's earnings, and the amounts so paid are deducted from the earnings of the party accordingly.

In reporting each month on the progress of the work in hand, the Engineer in charge of the same sends in a statement showing the number of parties employed, the number and names of men in each party, the work on which they are employed, the amount of work done during the month, the rate paid for same, and the total amount earned by each party. From this latter amount he deducts all payments made by the party for horse-hire, explosives, tools, etc., thus showing the net amount available for distribution amongst the members as their actual earnings. The return also shows the days and hours each man worked, and from this is worked out and shown the actual wages earned per man by each party for each day worked, and also per standard day of eight hours. For some of the information contained in this return—as, for example, the number of days and hours worked by each man—the Engineer has to depend mainly upon information furnished by the head-men of the parties; but the Government overseers check the information supplied as far as possible. The department takes every care by supplying each party with time-sheets, and instructing its overseers to examine them as frequently as possible, to secure the accuracy of these returns, and there is no reason to believe that the information furnished is untrustworthy.

The number of men employed under the co-operative system from time to time varies greatly, but about 2,000 may be taken as the average number for the last year or so.

SYNOPSIS OF THE LABOR LAWS OF ONTARIO.

The Mines Act.

R. S. O. 1897, chap. 36, provides that no boy under the age of fifteen years shall be employed in or allowed to be for the purpose of employment in any mine to which this Act applies, below ground. The Act applies to all mines, quarries and pits, and oil, gas and salt wells, and other openings from which ores and minerals of any kind or class are raised or taken, and to all furnaces or works for smelting, or otherwise treating rocks, ores or clays, sands, oils, brines or other minerals for any economic object.

No boy or young male person of the age of fifteen and under the age of seventeen shall be employed or allowed to be for the purpose of employment in any mine to which this Act applies below the ground on Sunday, or for more than forty-eight hours in any one week, or more than eight hours in any one day.

Any appliance used for the purpose of entrance to, or communication to or from any part of the mine, and which is operated by steam or other mechanical power, or by animal or manual labor, must be in charge of a male of at least twenty-one years of age. Where the motive power is supplied by an animal, the driver of such must be at least sixteen years of age.

No wages shall be paid to any person employed in or about any mine, etc., at or within any public house, beer shop or place for the sale of intoxicating liquors.

Each owner is required to make returns to the Bureau of Mines each year of the number of employees, their ages, and hours of labor, the rate of wages of each class, together with weights and estimates of values of minerals, mineral dressed and undressed, etc., and may be required by the Bureau of Mines to make such returns monthly or quarterly.

Provision is also made for proper ventilation, also care of explosives used in or about mines, etc., also for the apliances of safety in the operation of the shafts, cage, etc. Accommodation is also required near the entrance of the mine for the conveniently drying and changing of clothes of those employed in or about the mine, etc.

Provision is made for the reporting of any accident in writing within twenty-four hours of the occurrence of such accident, giving full particulars thereof.

Mechanics and Wage Earners' Liens.

R. S. O., 1897, cap. 153, provides protection to wage earners and contractors for loss on account of labor or material furnished in the erection of buildings or the construction of machinery.

The Act not merely recognizes the new form of liability, but provides the means of establishing and enforcing claims arising under it. The original Act has been several times amended, with a view to make it more simple and perfect in its working. The Act also provides that the liens for wages shall to a certain amount have priority over all other liens, and over any claims by the owner against the contractor, on account of failure to complete his contract.

In 1890 an Act was passed to simplify procedure for enforcing mechanic's liens. One clause provides that without issuing a writ of summons or taking any other preliminary proceedings, the plaintiff may file a statement of claim in the office of a master or official referee having jurisdiction in the County wherein the lands are situate. It is also provided that any number of lien holders may join in one action. The ruling or certificate of the master or official referee when filed in the proper office shall become a judgment of the High Court when the sum is $400,000 or over, of the County Court, when less than $400.00, but over $100.00, and of the Division Court when the sum is less than $100.00. The fees payable for entering such certificate as a judgment are as follows: In the High Court, $1.60, in the County Court, 80c, in the Division Court, 50c.

A further amendment provides that a device by any owner or contractor which shall be adopted in order to defeat the priority of wage earners for their wages under the several acts relating to mechanics' liens, shall as respects such wage earners be null and void.

A further provision regulates that in the case of wages due to any mechanic or other person in respect of work referred to in the 4th section of the Mechanics' Lien Act, the jurisdiction of a police magistrate in a city under the act respecting master and servant shall extend wages for thirty days or for a balance equal to the wages for thiry days, though the same or the balance thereof exceed the sum of $40.00 in the said section mentioned.

It is also provided that where no specific rate of wages has been expressly agreed to between the parties, the city police magistrate may order payment of the wages, reckoning the amount thereof according to the current rate of wages in the city in like cases, or according to what may appear to be a just and reasonable allowance, and any order of a city police magistrate for the payment of such wages as aforesaid shall be payable forthwith.

Woodmen's Liens.

R. O. S., 1897, cap. 154.—This Act applies to the Districts of Muskoka, Parry Sound, Nipissing, Algoma, Manitoulin, Thunder Bay and Rainy River, and to the provisional County of Haliburton, its purpose being to protect the wages of all engaged in those localities in cutting, skidding, felling, hauling, scaling, banking, driving, running, rafting or booming any logs, or timber, and any work done by cooks, blacksmiths, or others, usually employed in connection therewith, giving them priority of right for wages above all other claims, except such right as the Crown may have upon logs or timber for or in respect of any dues or charges, or which any timber slide company, or owner of slides and booms, may have thereon for or in respect of tolls.

This Act also provides that no payment of wages shall be made or offered to any person for any labor or services performed upon, or in connection with any logs or timber in the said districts or provisional county, by any cheque, order, I.O.U., bill of exchange, promissory note, or other undertaking other than a bank note, or bill drawn upon or payable at or within any place or locality not within the Province of Ontario. A violation of this provision incurs a penalty of not less than $5.00 or more than $20.00, recoverable by summary proceedings before a stipendary or police magistrate or justice of the peace, under the Ontario Summary Convictions Act.

Labor on Public Works.

R. S. O., 1897, cap. 155.—This Act secures payment of wages for labor performed in the construction of public works. Any foreman, workman or laborer or by any team employed on the work, giving notice not later than two months after the wages are due to the member of the Executive Council entering into the contract, for and on behalf of her Majesty, or having the supervision of the execution of the contract where the same is made, may cause such claim to be paid to the extent of any moneys or securities at the time of the filing of the said claim in the hands of the Crown for securing the performance of the contract.

The Act also provides that the said member of the Executive Council may in writing require every contractor or sub-contractor to forward a list each month showing the names, rate of wages, amounts due and unpaid for wages for labor done, such list to be attested on oath.

Failure to comply with this demand incurs a penalty of not less than $10 or more than $100 for every day during which default continues.

Wages.

R. S. O., 1897, cap. 156.—An Act respecting wages—applies to wages or salary, whether payable by the day, week, piece, job or otherwise. When an assignment is

made for the general benefit of creditors the assignee shall pay in priority to the claims of the ordinary or general creditors of the person making said assignment, the wages or salary of all persons in the employment of such person at the time of making such assignment or within one month before the making thereof, not exceeding three months' wages or salary, and such persons shall be entitled to rank as ordinary or general creditors for the residue, if any, of their claims. This provision also applies to the liquidation in distributing the assets of a company under the provision of the joint stock companies winding-up act, also to the sheriff who has made seizure, under the creditors' relief act, also under the act respecting absconding debtors, and also applies to the administration of the estate of deceased person. This Act is not intended to apply to an assignment made under the provision of any Act of the Parliament of Canada relating to or respecting bankruptcy or insolvency.

By an amendment of 1899, it was also provided that where an estate was not sufficient to meet priority of claims for wages over ordinary or general debtors, that the priority extends to the wage-earner over all others excepting the cost of liquidation.

It is also provided that the executor, liquidator, administrator, or other person engaged in winding up the estate, may forthwith, upon such estate coming into his hands, pay all claims for wages, without being chargeable, in case it shall in the end appear that said estate was insufficient to cover such payment, provided that he has acted in good faith, and had reasonable ground to believe that the estate would be sufficient.

The Trades Arbitration Act.

To Facilitate the Adjustment of Disputes Between Master and Workmen, R. S. O., 1897, chap. 159.

This act provides that any number of masters and workmen in any city, town, township or village in Ontario, may mutually agree to the formation of a board of arbitration for the purpose of settlement of any industrial disputes that may arise at any time between them in their relations as employers and employees.

The masters and workmen shall jointly sign a memorandum, whereby it is mutually agreed to establish such board; such memorandum to be filed with affidavits verifying the signatures thereto in the registry office of the registry division within which the masters and workmen reside. The board shall consist of not less than two masters and two workmen, not more than ten masters and ten workmen and a Chairman, and the number to constitute the board other than the Chairman shall be inserted in the memorandum, but no member of the board shall adjudicate in any case in which he or any relation of his are one of the parties.

The Board shall have power to appoint their own Chairman and two clerks, one for the masters and the other for the workmen's portion thereof. The Board is given all the powers conferred upon arbitration by the Arbitration Act, R. S. O., 1897, chapter 140, s. 10.

Any award made by the Board is final and conclusive between the parties thereto, without being subject to review or challenge by any court or authority whatsoever.

A committee of the Board, to be denominated the committee of reconciliation, shall be appointed by the Board, consisting of one master and one workman, who shall sit at such times as shall be appointed, and shall be renewed from time to time as occasion may require; and all cases or questions of dispute which are submitted to the Board by both parties thereto shall in the first instance be referred to the committee, who shall endeavor to reconcile the parties in difference. When such reconciliation is not effected, the matter in dispute shall be referred to the Board, to be disposed of as contested matter.

An Act Respecting Master and Servant

R. S. O., 1897, cap. 157—Provides hat no voluntary contract of services or indentures entered into by any parties shall be binding on them or either of them for a longer time than a term of nine years from the day of the date of such contract. Where an agreement is entered into between the master and the servant, by which a definite share of the profits or proceeds of a business is allotted to a servant,, either

in lieu of or additional to his salary, wages or other remuneration, and such agreement not creating any relation in the nature of a partnership, such agreement shall be deemed lawful, provided that in such case the servant must accept the statement of the said master as to proceeds involved in the agreement and shall not have power to examine accounts of said master.

An agreement, whether verbal or written, entered into between master and servant for the performance of any duty or service whatsoever shall be binding, but a verbal agreement shall not exceed the term of one year.

The Act also provides that no tavern keeper or boarding house keeper shall keep the wearing apparel of any servant or laborer in pledge for an expense incurred to a greater amount than $6, and shall surrender immediately any goods kept by said tavern or boarding house keeper under such circumstances upon the tender of said $6 or less sum due. This does not apply to other property of the servant or laborer.

Any agreement verbal or written between any person and any other person not a resident of Canada, for the performance of labor or service in the Province of Ontario shall be void and of no effect as against the person only migrating or coming. This foregoing provision does not apply to teachers, professional actors, artists, lecturers or singers or to such skilled workmen not procurable in Canada.

Proceedings may be taken under this Act for the collection of wages within one month after the engagement or employment has ceased, or within one month after the last instalment of wages under the agreement of hiring has become due. Where proceedings are taken under this act before a police magistrate, and payment of wages is ordered by him to be made by the master or employer to the servant or laborer, and the same are not paid within the time limited by the order, the same proceedings may be taken by the person claiming the benefit of the order as may be taken by a party having an unsatisfied judgment or order in the Division Court for the payment of any debt, damages or costs, as respects the examination of the judgment debtor touching his estate and effects, the means he has of discharging his liability, and the disposal he has made of any property, and the police magistrate shall have the like power and authority to enforce payment of the debt as are possessed by the Division Court Judge in like cases. The police magistrate may also, if he thinks fit, name in the order for payment of wages such time not exceeding twenty-one days, as to him may seem just and reasonable for the payment of the same and costs, and in case of non-payment within such time the complaint shall be entitled to take forthwith the proceedings for enforcement provided by the Division Court Act with respect to judgment debtors.

In the case of wages due and no specific rate has expressly been agreed upon between the parties, the police magistrate has the power to fix the rate on the basis of the current rate of wages in the city in like cases or according to what may appear to be a just and reasonable allowance.

Every agreement or bargain, verbal or written, expressed or implied, entered into having for its object the waiving of the provisions of this Act is declared null and void and of no effect as against any workman, servant, laborer, mechanic or other person.

Trade Disputes.

R. O. S., 1897, cap. 158.—An Act respecting Councils of Conciliation and Arbitration for settling industrial disputes.

The preamble to the Act recites : There is reason to believe that the establishment of councils of conciliation and arbitration for the friendly settlement of disputes between employers and employees, would conduce to the cultivation and maintenance of better relations and more active sympathies between employers and employees, and would be of benefit in the public interest by providing simple methods for the prevention of strikes and lockouts, from which industrial operations and the welfare of the country generally may suffer injury.

The Act applies to any person or body of persons incorporated or unincorporated employing not less than ten workmen in the same business in which the trade dispute has arisen, and their employees.

A claim or dispute under this Act shall include any disagreement between any employer and his employees in respect of any of the matters following :

1. The price to be paid for work done or in course of being done whether such disagreement shall have arisen with respect to wages or to the hours or time of working.

2. Damage alleged to have been done to work, or delay in finishing the same; not finishing the same according to agreement; or dispute respecting materials supplied to employees or alleged to be bad, unfit or unsuitable.

3. The price to be paid for mining any material or substance mined or obtained by mining, hewing, quarrying or other process; or the allowances, if any, to be made for bands, refuse, faults or other cause whereby the mining of the mineral substance is impeded.

4. The performance or non-performance of any stipulation or matter alleged to have been in the agreement, whether in writing or not.

5. Insufficient or unwholesome food supplied to employees where there is an agreement to victual them, or to supply them with provisions or stores of any kind.

6. Ill-ventilated or dangerous workings or places in mines, or unwholesome or insanitary rooms or other places of accommodation, in which work is being performed, or want of necessary conveniences in connection with such rooms or places.

7. The dismissal or employment under agreement of any employee or number of employees.

8. The dismissal of any employee or employees for their connection with any trade or labor organization.

Duties, etc., of the Registrar

It shall be the duty of the Registrar under this Act to deal with all applications coming within the meaning of the Act; to keep a registrar in which shall be entered all particulars of cases referred to the Council of Conciliation, and the settlement thereof. The Registrar shall have power to summon witnesses and issue notices in connection with the sittings of each Council of Conciliation.

Council of Conciliation.

Such council as above-mentioned shall consist of four conciliators, two to be nominated by each of the parties in dispute; each nomination in writing to be lodged with the Registrar.

The council shall deal with cases in which the parties of the dispute jointly agree to refer the claim or dispute to the Council of Conciliation for settlement. Upon receipt of application the Registrar shall refer same to the Council, and under the Act shall carry out the directions of the Council in the endeavor to affect a settlement of the dispute or claim.

Either party of the dispute or claim may, for the purpose of this Act, be represented by one or more persons, not exceeding three, authorized by such party as manager or managers in that behalf, and such party shall be bound by the acts of this representative or representatives ; where the party number fewer than twenty the manager must be authorized in writing signed by the members of the party to act for and on their behalf. Where the party numbers twenty or more, the manager may be elected in such manner as the members of the party think proper.

The statements of those thus agreeing to refer their dispute to the Council of Conciliation should be forwarded to the Registrar before the meeting of the Council. When the parties of the dispute or claim have nominated their conciliators, the Registrar shall by notice in writing convene a meeting of the conciliators, mention-

ing time and place of meeting, the same being selected with due regard to the convenience of all concernd. The Council of Conciliation shall transmit to the Registrar a report setting forth the result of the reference. In case such report is to the effect that the Council has failed to bring about any settlement or adjustment of the dispute or claim, the Registrar shall transmit a copy of the report to each party of the dispute or claim; whereupon either party may require the Registrar to refer the dispute to the Council of Arbitration for settlement.

Council of Arbitration,

There shall be two councils of arbitration, one for the settlement of disputes and claims between railway companies (including street railway companies), and their employees, both in respect of railway construction or traffic on railways, and a council of arbitration for the settlement by award in respect of disputes and claims other than between railway companies and wage earners employed in respect of railway construction or traffic.

Each council shall consist of three members, one to be appointed by the Lieutenant-Governor on the recommendation of the employees, and one to be appointed by him on the recommendation of the employers. The third member to be appointed shall be President of the Council, and may be appointed by the Lieutenant-Governor on the recommendation of the two members already appointed, within twenty-one days of their appointment. Failing this, the Lieutenant-Governor shall appoint as President of the Council an impartial person, not likely to be biased in favor of or against employers or employees. The same person may be President of both Councils.

As soon as practicable after the appointments have been made, the names of the members of the Council shall be notified by the Registrar in the Ontario Gazette. The Lieutenant-Governor may cancel the appointment of any member on the recommendation of the authority by which his appointment was recommended. The term of office of a member of a council shall be two years; and at the end of every term of two years a fresh appointment of members shall be made in manner aforesaid. Every member shall be eligible for reappointment.

Qualification of Voters in the Interest of Employers.

For the person to be recommended by the employers every employer in the Province, having at least ten persons in his employment, shall be entitled to one vote; every organization in the Province, whether incorporated or unincorporated, representing the interests of employers, each member of which has at least ten persons in his employment, shall be entitled to one vote.

Every Board of Trade in the Province, legally constituted, shall be entitled to one vote for a representative of the employers in each Council.

Qualification of Voters in the Interest of Employees.

For the person to be recommended by employees in matters not belonging to railways, every trades and labor council, every district assembly of the Knights of Labor, every federated Council of building trades, every lawfully incorporated trades union, every organization of wage-earners of an industrial calling primarily constituted for, and actually and bona fide operated for the regulation of the wages and hours of labor as between employers and employed, shall be entitled to one vote; but this shall not be deemed to include co-operative associations or societies formed under the Revised Statute respecting Co-operative Associations.

For choosing the person to be recommended by employees of railway companies as a member of the Council of Arbitration in matters belonging to railways, every organization in the Province, whether incorporated or unincorporated, exclusively representing the interest of wage-earners employed in respect of railway construction or

traffic on railways shall be entitled to one vote; but this shall not be deemed to include co-operative societies or associations.

The Registrar shall give notice in The Ontario Gazette, calling on all organizations and persons entitled to vote for a member to be recommended to either Council, or claiming to be so entitled, to communicate with him on or before the 1st day of August, 1898, and every second year thereafter. Such notice is to be inserted for at least four weeks before the said day in each of the said years.

The Registrar shall forthwith, after the 1st day of August aforesaid, prepare a list of the persons and organizations appearing to be entitled to vote for a person to be recommended for appointment to each of the said Councils respectively, and may refer any doubtful claim to the Minister of Agriculture for his advice or direction.

Each list so to be prepared shall give the last known postoffice address of every person and organization entitled to vote as employers and employees respectively for the said Councils respectively, and shall be published in The Ontario Gazette, and shall be open to inspection at any time by any person without fees, in the office of the Registrar, during office hours.

Between the 1st and 30th days of September, 1898, and between the same days of every second year thereafter, the Registrar shall transmit by post to the address of each person and organization entitled to vote, a voting paper; and such voting paper may be in the following form:—

Voting paper of (naming the person or organization).

A. B. (person recommended) is hereby recommended to be appointed a member of the council of arbitration for disputes between railway companies and their employees (or in matters not relating to railway disputes) under the Ontario Trade Disputes Conciliation and Arbitration Act, on behalf of the employers or employees, as the case may be).

(Signed)

The voting paper of any person entitled to vote under this Act as an employer shall be signed by himself or by some duly authorized person; and the voting paper of any organization entitled to vote shall be signed by the president or vice-president of the organization, or, in the absence of such president or vice-president, by any office bearer of the organization other than the secretary thereof, and shall be countersigned by the secretary or the acting secretary, or, in the absence of such secretary or acting secretary, by any two members not being office bearers. The voting papers of a Board of Trade shall be under the corporate seal of the Board.

The voting paper shall be forwarded to the Registrar in a stamped envelope, addressed to the Registrar of Councils of Conciliation and Arbitration, Toronto, and endorsed, "Voting paper under the Ontario Trades Dispute Conciliation and Arbitration Act."

Every voting paper shall be forwarded by mail or otherwise to the Registrar, before the 15th day of October, in the year in which the voting is to be held, and no voting paper received after said date shall have any effect or validity.

After the 15th of October the Registrar shall count the recommendations of employers and employees for each council, and shall forward same to the Minister of Agriculture with report thereon: and the Minister of Agriculture shall publish in The Ontario Gazette the names of the persons appointed by the Lieutenant-Governor upon such recommendations to be members of each council: and also the names of, and the number of votes of the five persons who shall receive the greater number of votes for each council on behalf of employers and employees respectively.

In case either employers or employees, or both, fail to recommend any person to represent them on either or both the councils as providd for in this section, the Lieutenant-Governor in Council may appoint a person or persons to fill the vacancy or vacancies.

The Mayor of any city or town upon being notified that a strike or lockout is threatened, or has actually occurred within the municipality, shall at once notify the Registrar thereof by writing, stating the name of the employer, the nature of the

dispute, and the number of the employees involved, as far as his information will enable him to do so.

Upon being notified that a strike or lockout is threatened or has taken place, it shall be the duty of the Councils of Arbitration, under this Act, to communicate with the parties concerned as soon as practicable, and endeavor by mediation to affect an amicable settlement, and if deemed best to enquire into the causes of controversy, it shall proceed as provided in this Act in the case of a reference.

The Council of Arbitration shall sit and conduct its proceedings as an open court, and in making its decision shall be governed by the principles of equity and good conscience. The President shall for the purpose of preserving order during any sitting of the council have all the powers of a Judge of a High Court of Justice, save that he shall not have the power of committing for contempt.

Any two members shall constitute a quorum for the transaction of business, and may hold meetings at any time and at any place in the Province of Ontario.

The Council may order that an examination or investigation may be held before any one member of the Council, but such member shall make report to the Council, and his decision shall not be considered binding until approved of by the Council or a majority thereof.

The report of award of the Council shall be made within one month after its hearings of a reference, and shall be by, and under the hands of, a majority of the members of the Council.

The report of award, or a copy thereof, shall be deposited in the office of the Registrar, and shall be open to inspection during office hours without charge.

Miscellaneous Provisions.

For the purposes of this Act the Councils of Conciliation and Arbitration shall have power (a) to visit the locality where the dispute has arisen, and hear all persons interested who may come before them; (b) to summon witnesses and to administer oath, or to take the affirmations of any person attending as a witness before the Council. On refusal of any person to attend as witness, application may be made in a summary way to a Justice of the Peace for an order compelilng such attendance.

No fees shall be paid to the Registrar by any party in respect of any proceedings under this Act.

Every member of such Council shall be remunerated as follows:—

Preliminary meetings	$3 00
Whole-day sittings	4 00
Half-day sittings	2 00

WORKMEN'S COMPENSATION FOR INJURIES, R.S.O. 1897, CAP. 160.

This Act applies to all wage-earners while engaged in their daily occupation for injuries received by reason of any defect in the condition or arrangement of the ways works, machinery, plant, buildings or premises connected with, intended for or used in the business of the employer; or by reason of the negligence of any person in the service of the employer who has had any superintendence entrusted to him, or who has the charge or control of any points signal, locomotive, engine, machine or train upon a railway, tramway or street railway.

If the injuries received result in the death of the workman, his legal representative, or those entitled in case of death, shall have the same right of compensation and remedies against the employer, as if the workman had not been a workman of, nor in the service of the employer, nor engaged in his work.

Work Done Under Contract.

Where the execution of any work is being carried into effect under any contract, and personal injury is sustained by any workman, through any defect or neg-

ligence, as mentioned above, the person for whom the work is done shall be liable to pay compensation for the injury as if the workman had been employed by him, and for that purpose shall be deemed to be the employer of the workman within the meaning of this Act.

Personal injury caused to workman employed on or about any railway.

Such injury shall be deemed to have been caused by reason of a defect within the meaning of the clause numbered 1 of section 3 of this Act.

The amount recoverable under this Act shall not exceed a sum equivalent to the earnings during three years previous to the injury received, in like employment within this Province, or the sum of $1,500, whichever is the larger sum, and such compensation shall not be subject to any deduction or abatement, save as is specially provided for in section 12 of this Act.

When compensation is awarded in the case of the death of a workman through an injury sustained by him in the course of his employment the amount recovered may be divided between the wife or husband, parent or child, of the deceased, as the case may be, in such shares as the Court or Judge may direct, or if tried by jury, as the jury may determine.

No action shall be maintainable against any employer, unless notice that the injury has been sustained is given within twelve weeks of the accident, and the action is commenced within six months of the occurrence of the accident, or in case of death, within twelve months from the time of death; in the latter case the want of such notice shall be no bar to the maintenance of such action, if the Judge be of opinion that there was reasonable cause for want of such notice.

Notice under this Act shall give the name and address of the person injured, and shall state in ordinary language the cause of the injury, the date on which it was sustained, and the amount of compensation claimed, and shall be served on the employer either at his residence or place of business. The notice may also be served by post in a registered letter, and may be deemed to have been served when the letter containing the notice would be delivered in the ordinary course of post.

If the defendant in any action intends to rely for his defence on insufficient notice, or on the ground that he was not the employer of the workman injured, he shall, not less than seven days before the hearing of the action, give notice to the plaintiff of his intention to rely on such defence.

In the trial of an action for the recovery for compensation under this Act before a Judge without a jury, one or more assessors may be appointed by the Court or Judge, for the purpose of ascertaining the amount of compensation. In any such action a party who desires assessors to be appointed, shall, ten clear days before the trial, file application stating the number of assessors he proposes to be appointed, and the names, addresses and occupations of the persons who have expressed, in writing, their willingness to act as assessors. If the applicant has obtained the consent of the other party to the persons named being appointed, he shall file such consent with his application.

This Act, by an amendment of 1899, gives the choice of settlement of claims for injuries, under the Act, by either action or arbitration, subject to appeal by either party to the High Court of Justice.

Apprentices and Minors, R.S.O. 1897, Cap. 161

Any parent, guardian or other person having the care of a minor, or any charitable society authorized to exercise the powers conferred by this Act, may, if the minor consent, if the minor is a male not under the age of fourteen years, or a female not under the age of twelve years, and without consnt if he or she is under such age, constitute to be the guardian of the child, any trustworthy person who is willing to assume the duty of a parent toward the child, but the parent shall remain liable for the performance of any duty imposed by law, in case the guardian fails in the performance thereof.

The guardian shall thereupon possess the same authority over the child as he or she would have were the ward his or her own child, and shall be bound to perform the duties of a parent toward such child.

Rights and Liabilities of Minors.

No minor who is dependent upon charity for support shall be removed from any charitable institution or from the control of any private person who is charitably taking care of the minor, by the father or mother or guardian, against the will of the head of such charitable institution or of such private person, without an order from the Judge of the High Court, or from the Judge of the County Court, or the Mayor or Police Magistrate of the city or town where the minor is; and the Judge or other person so empowered may refuse to grant the order unless he is satisfied that the removal will tend to the advantage of the minor. When a minor, who has no parent or legal guardian, enters into an engagement to perform any service, he shall be liable upon the same, and shall have the benefit thereof, as if he were of legal age.

Apprenticing Minors.

A parent, guardian or other person having the care of a minor, or any charitable society authorized to exercise the powers conferred by this Act, may, with the consent of the minor, if a male not under the age of fourteen years, bind him as an apprentice by indenture to any respectable master mechanic, farmer, or other person carrying on a trade or calling for a term not to extend beyond the minority of the minor; or in the case of a female not under the age of twelve years, may, with her consent, bind the minor to any respectable person carrying on a trade or calling, or to domestice service with any trustworthy person, for a term not to extend beyond the age of eighteen years.

Where the father of an infant child abandons and leaves the child with the mother, the mother, with the approbation of two Justices of the Peace, may bind the child as an apprentice to any person as mentioned in the last section, until the child attains the age of twenty-one years in the case of a male, and eigheen in the case of a female; and an indenture to that effect under the hand and seal of the mother and countersigned by such justices shall be valid; but no child, having attained the age of fourteen years, shall be so apprenticed, unless he or she consents.

In a city or town, the Mayor, Judge of the County Court or Police Magistrate, and in a county, the Judge of the County Court of the county, may put and bind for a like period to any person mentioned in the several sections of this Act, with the consent of such person and of the minor (or if such minor is a male under the age of fourteen years, or a female under the age of twelve years, then without the consent of such minor), any minor who is an orphan or who has been deserted by his or her parents or guardian, or any minor who is dependent upon charity for support; and such apprentice and the master of such apprentice shall be held in the same manner as if the apprentice had been bound by his or her parents.

All wages reserved by any indenture or otherwise to be paid for the services of any minor, shall, if not payable to the parent, be either payable to the minor or to some person for the benefit of the minor.

If the master of an apprentice dies, the apprentice, if a male, shall be transferred to the person who continues the establishment of the deceased, and such person shall hold the apprentice on the same terms as the deceased, if living, would have done.

A master may transfer his apprentice, with his consent, to any person who is competent to take or receive any apprentice, and who carries on the same kind of a business.

Every master shall provide his apprentice with suitable board, lodging and clothing or such equivalent therefor as is mentioned in the indenture, and shall also properly instruct him in his trade or calling.

Every apprentice shall faithfully service his master, and obey all his lawful and reasonable commands, and shall not absent himself from his service without his consent.

Any indentured apprentice leaving his employment is liable to the penalties of the Act, if apprehended in the Province of Ontario, up to three years of his desertion.

An Act Respecting Innkeepers, R.S.O. 1897, Cap. 187.

Every innkeeper, boarding-house keeper and lodging-house keeper shall have a lien on the baggage or property of his guest for the value and property of his guest for the value or price of any food or accommodation furnished, and in addition to all other remedies provided by law, shall have the right, in case the same remains unpaid for three months, to sell by public auction the property of such guest, on giving one week's notice by advertisement in a newspaper of the intended sale, stating the name of the guest, the amount of his indebtedness, and giving a description of the property to be sold, and shall pay over the surplus of such sale (if any) to the person entitled thereto, on application being made by him therefor.

Where an innkeeper, etc., or livery stable keeper has by law a lien on a horse or other animal for the price of any food or accommodation supplied to such animal or care bestowed thereon, he shall have the right, in addition to the other remedies provided by law, if such price remains unpaid for the space of two weeks, to sell by public auction such horse or other animal, on giving two weeks' advertisement in a newspaper, stating (if known) the name of the person who brought such horse or other animal to the inn, etc., the amount of the indebtedness, and the name of the auctioneer, and giving the description of the horse or other animal; and after the sale the innkeeper, etc., shall pay over the surplus (if any) to the person entitled thereto on application being made by him therefor.

No innkeeper shall be liable to make good to any guest any loss or injury to goods or property to a greater amount than the sum of $40.00, except in the following cases :—

Where such goods or property have been stolen, lost or injured through the wilful act, default or neglect of such innkeeper, or any servant in his employ; where such goods or property have been deposited expressly for safe custody with such innkeeper.

Pawnbrokers, R.S.O. 1897, Cap. 188.

The Act defines any person who takes and receives, by way of a pawn, pledge or exchange, any goods for the repayment of money lent thereon, shall be deemed a pawnbroker within the meaning of the Act.

Any person carrying on the trade of pawnbroker shall have license issued by the treasurer of the municipality in which he is carrying on the business. Any person carrying on the business of pawnbroker without a license shall forfeit $50.00 for every pledge he takes, recoverable with costs before police magistrate.

Each pawnbroker is required to exhibit sign with the word pawnbroker thereon, under a penalty of $40.00.

Each pawnbroker is required to have painted or printed in a conspicuous place in his shop the rates of profits he is allowed to charge under the Statutes of Canada, which rates are as follows :—

R. S. C., cap. 128, provides that every pawnbroker may take the following rates above the principal sum advanced before he is obliged to re-deliver the goods pawned, that is to say, upon every pledge upon which there has been lent not exceeding 50c. the sum of one cent for any time not exceeding one month, and the same for every month afterwards, including the current month in which the pledge is redeemed, although such month has not yet expired; and so on progressively, and in the same proportion for every sum of fifty cents up to twenty dollars.

When the sum lent exceeds twenty dollars, the pawnbroker may take up all beyond that amount after at the rate of five cents for every four dollars by the month, and so on in proportion for any fractional sum.

Such sums respectively shall be in lieu of and taken as full satisfaction for all interest due and charges for warehouse room.

On all pledges where the sum lent exceeds $1.00, the pawnbroker is required to make entry of such in a book kept for the purpose, giving a description of the goods received, in pledge, the sum lent thereon, the date, and the name and address of the person making the pledge, and whether he is a housekeeper or lodger.

When the amount lent is above $2.00 a separate book must be kept for the purpose of entry, the pledges received to be numbered in consecutive order in the book. The pawnbroker shall issue to the person making the pledge a note or memorandum written or printed, containing a description of the goods pawned, and money advanced thereon, the date and name and address of the person making the pledge, and whether a housekeeper or lodger. On the back shall be printed or written the name and address of the pawnbroker.

For such ticket or memorandum he will be allowed to charge the following rates:

If the sum lent is under $1.00, the ticket shall be free.

If the sum lent is over $1.00 and under $2.00, the charge shall be one cent.

If the sum lent is over $2.00 and under $5.00, two cents may be charged.

If the sum lent is over $4.00 and under $20.00, three cents may be charged.

When the sum lent is over $20.00 and upwards seven cents may be charged.

No goods pledged can be sold by the pawnbroker until one year has expired after the pledge of such goods. If the amount lent exceeds $2.00 the sale must be by public auction, and must be exposed to the public view. And a description of the goods, the date of the pledge, etc., published on two separate days in a public newspaper, at least two days before the sale.

Should the goods be sold for more than was due thereon, and in case of demand within three years after the sale, the overplus, after deducting the costs, shall be paid to the person on whose account the goods were pawned.

No pawnbroker shall:

1. Purchase, receive or take any goods in pledge from any person who appears to be under the age of fifteen years, or to be intoxicated with liquor, nor

2. Purchase or take in pawn, pledge or exchange, the ticket or memorandum of any other pawnbroker

3. Employ any servant or any other person under sixteen years of age to take any pledge.

4. Receive any goods by way of pawn, pledge or exchange on any fast or Thanksgiving day appointed by authority, or on Sunday, or any other day before 8 o'clock in the morning, nor after 8 o'clock in the evening, except on Saturday and the evening preceding Good Friday and Christmas Day. On such days he may keep open his place of business until 10 o'clock p.m.

Liability of Directors of Companies for Wages. R.S.O. 1897, Cap. 191.

The directors of the company shall be jointly and severally liable to the laborers, servants and apprentices thereof for all debts not exceeding one year's wages due for services performed for the company; but no director shall be liable to an action therefor, unless the company has been sued therefor within one year after the debt became due, nor yet before an execution against the company has been returned unsatisfied in whole or in part; and the amount due on such execution shall be the amount recoverable with costs against the directors.

Liability of Directors of Mining Companies for Wages R.S.O. 1897, Cap. 197.

All mining companies in force in Ontario, shall be subject to the provisions of this Act.

The directors of a company shall be jointly and severally liable to the laborers, etc., for all debts not exceeding one year's wages due for services performed; but no director shall be liable to an action therefor unless the company has been sued therefor within one year after the debt became due, nor yet before an execution against the company has been returned unsatisfied in whole or in part; and the amount due on such execution shall be the amount recoverable with costs against the directors.

Co-operative Associations. R.S O. 1897, Cap. 202.

Any seven or more persons who desire to associate themselves together for the purpose of carrying on any trade, labor or business, whether wholesale or retail, except the working of mines, minerals, or quarries, and except also the business of banking and insurance, and the business of a loan corporation within the meaning of the Loan Corporations Act, may make, sign and acknowledge before a Notary Public or Justice of the Peace, in duplicate, and file in the office of the Registrar of the Registry Division in which the business of the association is intended to be carried on, a certificate in writing on the form set forth in the schedule of this act, or of the same effect together with a copy of the rules agreed upon for the regulation, government and management of the association, signed by such persons respectively.

Upon the filing of the certificate and rules as aforesaid, the members of the association shall become a body corporate by the name therein described, with power to hold such lands as are required for the convenient management of the business.

No association shall be registered under a name identical with that by which any other existing association has been registered, or so nearly resembling such name as to be likely to deceive the members or the public; and the word limited shall be the last word in the name of any association registered under this act.

A member of an association incorporated under this act may have shares therein to an amount mentioned in any by-law of the association, provided the same does not exceed $1,000.000.

The liability of the shareholders shall be limited, that is to say: No shareholder shall be in any manner liable for or charged with the payment of any debt due by the association, beyond the amount of his share, and having fully paid up the amount of his share shall not be subject to any further liability.

Every person appointed to an office touching the receipt, management, or expenditure of money, or with the receipt of gooods, wares or merchandise for the purposes of the association, shall before entering upon the duites of his office, give such security as is deemed sufficient by the trustees, which security shall be renewed from time to time as the amount of the business, or other circumstances, may, in the discretion of the trustees be rendered necessary.

The business of the association shall be a cash business exclusively; no credit shall be either given or taken, and no officer, member or servant of the association shall have power to contract any debt in its name, except in respect of rent of the premises required for the business, the salary of clerks and servants, and such like contracts, necessary in the management of the affairs of the association; everything shall be bought and sold for cash only.

Insurance by Trades Unions. R.S O. 1897, Cap. 203.

Where a friendly society registered under this Act has its head office elsewhere than in the Province of Ontario the Grand or other Provincial body, or the Lodges situated in the Province may file with the Insurance Register, an application for Provincial incorporation, setting forth the facts of the case, and the proposed corporate name and head office, and the purpose and rules of the society; also the names of those persons who are to be its first trustees, and stating the mode in which their successors are to be elected; also furnishing such other information as the Registrar requires.

Upon due application made the Registrar may name a day for the hearing of the application, and such public hearing of the application shall be given in The Ontario Gazette and otherwise as the Registrar directs.

If, upon the hearing, it appears to the Registrar that such incorporation ought to be granted, he shall have authority to certify in duplicate, or in as many parts as may be required, under his hand and the seal of his office, that he finds entitled to incorporation under the name and for the purposes specified in the certificate, the persons mentioned therein.

One of the original parts of the certificate shall be filed in the office of the Provincial Registrar, together with such other documents as the Insurance Registrar by his certificate requres to be filed; and from the day of such filing the persons mentioned in the Insurance Registrar's certificate and their associates and successors shall henceforth be a body corporate and politic, and shall have the powers, rights and immunities vested by law in such bodies.

Upon due application the Insurance Registrar shall have authority to admit to registry as a friendly society the body so incorporated.

Upon like proceedings taken as enacted in the first section under this Act, incorporation may be granted in either of the two following cases :

Where any trade or labor union, or trade or labor organization purposes to undertake contracts with its own members exclusively, for any of the insurance benefits enumerated in and permitted by clause 3 of section 62, or contracts to furnish tools or to pay unemployed or superannuation benefits to the said members.

Where any organization of persons resident in Ontario, consisting of not less than twenty-five members and managed and operated as a friendly society under rules conforming to this Act purposes to contract with its own members exclusively for sick benefits, not exceeding five dollars a week and a funeral benefit of not more than one hundred dollars, or either of such benefits.

The body so incorporated may upon due application, be admitted to register as a friendly society; but unless and until so registered, the corporation shall not undertake, nor agree to offer to undertake, any contract insuring the said or other insurance benefits.

Where any society, association, union, organization or lodge already incorporated under a prior Act of this Province becomes incorporated under this Act, such prior incorporation shall be deemed to have been merged in and superseded by the said latter incorporation.

In addition to friendly societies standing duly registered as such, at the passing of this Act, the following shall be admissible to registry on the Friendly Societies' Register:

Societies incorporated from time to time by virtue of sections 33, 34, 36, 37 and 38 of this Act :

Any corporation not provided for elsewhere herein which has, by virtue of an Act of the Parliament of Canada, an insurance and provident society or association, or an insurance or guarantee fund in connection with the corporation, may upon due application for registery under this Act, be registered on the Friendly Society Register.

Provided that where any bona fide trade union or labor organization provides by its constitution, by-laws or rules for the assistance, relief or support of its members, the Registrar may, by writing, under his hand and the seal of his office, declare the organization exempt from the operation of this Act; and such certificate shall remain valid until by like writing revoked; and the organization so exempted shall not be subject to any penalty imposed by this Act;

Any corporation in Ontario which at the passing of this Act has under authority of an Act of Canada created a fund for paying a gratuity on the happening of death, sickness, infirmity, casualty, accident, disability or any change of physcial or mental condition, shall, upon due application for registry hereunder, be entitled to be registered on the Friendly Society Register;

Any association of the civil servants or employees of the Dominion of Canada, incorporated by virtue of an Act of the Parliament of Canada, may, upon due application, be admitted to registry.

Railway Companies—By-laws Affecting Employees. R.S.O. 1897, Cap. 207.

Every railway company shall make such by-laws, rules and regulations to be observed by the conductors, engine-drivers and other officers and servants of the company, and by all other persons and companies using the railway of such company, and such regulations with regard to the construction of the carriages and other vehicles, to be used in the trains of the railway of the company, as are requisite for the perfect carrying into effect of the provisions of this part of this Act and the orders and regulations of the Lieutenant-Governor in Council.

Any railway company may, by a by-law, impose upon any officer, servant or person who, before the contravention of such by-law has had notice thereof, and is employed by the company, a forfeiture to the company of not more than thirty days' pay of such officer or servant, for any contravention of such by-law, and may retain such forfeiture out of the salary or wages of the offender.

The notice of the by-law, or of any order or notice of the Commissioner of Public Works, may be proved by proving the delivery of a copy thereof to the officer, servant or person, or that he signed the copy thereof, or that a copy thereof was posted in some place where his work or his duities, or some of them were to be performed.

Such proof, with evidence of the contravention, shall be a defence to the company in any action for the recovery from it of the amount so retained. The Electric Railway Act, R.S.O., 1897, cap. 209, contains four sections (137-140) exactly similar in terms to the above.

Street Railways—Lien for Wages. R.S.O. 1897, Cap. 208.

Every mechanic, laborer or other person who performs labor for wages upon the construction or maintenance of the railway or the works connected therewith, shall have upon the said railway and other property of the company a lien for such wages not exceeding the wages for thirty days, and the said lien may be enforced in the manner provided for enforcing liens for wages by the Mechanics' and Wage-earners' Lien Act.

Immigration Aid Societies. R.S.O. 1897, Cap. 212.

The Minister of Agriculture shall from time to time divide the Province of Ontario into immigration districts, either by counties, ridings, municipalities, as seems to him most expedient; and in each of such districts there shall be an immigration office and an immigration agent; and such division and any future alteration thereof, shall be notified in The Ontario Gazette as the immigration district of the place where the immigration office is kept.

In each of such districts an Immigration Aid Society may be formed and constituted under this Act, for the purpose of assisting immigrants to reach Ontario from Europe and elsewhere: and of obtaining employment for them on their arrival in the Province: and of enabling persons in the Province in want of laborers, artizans or servants to obtain them by such immigration; for every such society shall consist of not less than twenty-five persons, whether resident or not in the immigration district, agreeing to form such society and to subscribe among them, as the capital of the society, not less than $500.00, in fifty shares of $10.00 each, one-fourth of which, at least, shall be paid on subscribing the declaration of membership into the hands of a person agreed upon as their secretary-treasurer, by the persons present at the meeting at which it is agreed to form the society.

The Act also provides for the regulation and control of such societies under the inspection of a district agent, to be appointed by the Minister of Agriculture. Such societies have power to make loans to immigrants, and provision is made for their inspection by the Minister of Agriculture.

AN ACT RESPECTING MUNICIPAL MATTERS. R.S.O. 1897, CAP. 223.

This Act provides that the hours for the nomination of candidates for the offices of aldermen in cities may, by by-law, be fixed at half-past seven o'clock in the evening, and for polling from nine in the morning until seven o'clock in the evening. This latter provision applies only to cities of 100,000 inhabitants and over. A by-law to extend the time of holding the election until seven o'clock in the evening must be passed before the fifteenth day of November of the year in which such by-law is to take effect. In all other cases the polls shall be opened at nine o'clock in the morning, and shall continue open till five in the afternoon and no longer.

Powers of Police Commissioners as to Livery Stables, Etc.

The Board of Commissioners of Police shall, in cities, license and regulate second-hand shops and junk stores, and the owners of livery stables and of horses, cabs, carriages, carts, trucks, sleighs, omnibuses and other vehicles regularly used for hire within the said city, and shall establish the rates of fare to be taken by the owners or drivers of such vehicles for the conveyance of goods or passengers from any point within the city to any point not more than three miles beyond the limits of such city, and may provide for enforcing such rates.

The Board of Commissioners of Police in any city may pass by-laws defining areas or districts in the city within the limits of which no livery stable, sale, or boarding stable in which horses are to be kept for hire or for express purposes shall be established or maintained.

The Board of, etc., in any city shall pass by-laws regulating the hours of labor of persons employed in livery or boarding stables, or as drivers of cabs, carriages or sleighs kept for hire within the city, and also the hours of labor of persons employed by owners of horses, carts, etc., kept for hire within the city, and for licensing drivers of cabs within the said city.

The Board, etc., shall also regulate and control children engaged as:

(a) Express or despatch messengers:

(b) Vendors of newspapers and small wares:

(c) Bootblacks.

The Board in any city, and the council in any town, may regulate and prohibit the playing of bands and of musical instruments on any street, highway, park or public place in the city, but this shall not apply to any military band attached to any corps of the militia of Canada when on duty under command of its regular officer.

Protection of Workmen and others on Buildings.

By-laws may be passed by the councils of municipalities, townships, cities, towns and villages for inspecting and regulating the construction and erection of hoists, scaffoldings and other constructions used in erecting, repairing, altering or improving buildings, chimneys or other structures; and for making all necessary regulations for the protection and safety of workmen and other persons employed thereon; and for appointing inspectors of scaffolding.

Egress from and Construction of Buildings.

By-laws may be passed as above for regulating the number of doors on churches, theatres, halls or other buildings used for worship, public meetings or places of amusement, and the street gates leading thereto; and the construction and width of stairways,

in churches, etc., and in factories, warehouses, hotels and boarding houses; and also the size and number of doors and other means of egress from all hospitals, schools, colleges and other buildings of a like nature, and also the structure of stairs and railings in all such buildings, and the strength of beams, walls and joists and their supports, and for compelling the production of plans for inspection and for enforcing the observance of such regulations.

For preventing the obstruction of the halls, aisles, passage-ways, etc., in any such building or leading thereto during the occupation of the same by any public assemblage.

Hoists and Elevators.

For licensing and inspecting elevators and hoists for passengers or freight, used by the public or by employees, and for imposing and enforcing penalties for the infringement of such by-laws, and for prohibiting and preventing the use of elevators and hoists contrary to the provisions of such by-law. But the provisions in this clause contained shall be subject to the Ontario Factories Act and of any other Act making provisions applicable to elevators and hoists.

By the Councils of Cities, Towns and Villages.

For regulating the construction of cranes, hoists and elevators, and for determining the manner in which elevators in buildings shall be constructed and worked, and for providing for the inspection of all cranes, etc., but none of the provisions of such by-laws shall be inconsistent with the Ontario Factories Act so far as the same provides for the regulation or construction of cranes, etc.

Cab Stands and Booths.

By-laws may be passed by the councils of cities, etc., for authorizing and assigning stands for vehicles kept for hire on the public streets and places; and for the erection and maintenance of covered stands for booths on streets, etc., and for the protection or shelter of the drivers of such vehicles. Provided that no such booth shall be placed upon any sidewalk without the previous consent of the owner or lessee of the property fronting or adjoining such stand or booth.

By-laws may be passed by the councils of cities, etc., for building, equipping and maintaining and operating street railways in, along and over such streets of the city or town and subject to and upon such terms as the Lieutenant-Governor-in-Council may approve; and for leasing the same from time to time on such terms as may be determined on; and for levying an annual special rate to defray the yearly interest on the expenditure therefor, and to form a yearly sinking fund for the payment of the principal within a time not exceeding thirty years.

A municipal corporation which builds, constructs, owns or manages a street railway shall have and exercise the same rights and powers and be subject to the same liabilities as street railways and companies under the Street Railway Act, except where the same conflict with or are repugnant to the rights, powers, liabilities or duties of a municipal corporation as provided by law.

Electric Street Railways.

By-laws may be passed by the councils of cities for compelling every electric railway company, operating its railway within the limits of such city, to provide proper and sufficient enclosed vestibules upon its street cars to protect the motormen and persons in charge of such cars, from exposure to cold, snow, rain or sleet, during the months of November, December, January, February and March in every year, while engaged in operating the cars.

Schools for Artisans.

By-laws may be passed by the councils of municipalities, counties, cities and towns for establishing schools for the training and education of artisans, mechanics and workmen in such subjects as may promote a knowledge of mechanical and manufacturing arts, and for acquiring such real property as may be requisite for such schools; and the erection and maintenance of suitable buildings thereon; and for improving and repairing such school buildings, and for disposing of such property when no longer required. Councils establishing such schools may appoint boards of trustees to conduct the schools, giving them such authority as the councils may deem expedient.

For making grants in aid of such schools, or to art schools, approved by the Department of Education, as they may deem expedient.

In Amendment to the Municipal Act of 1900.

Provides that in cities having a population of more than 15,000 the council may, by by-law, provide that the aldermen shall be elected by a general vote of the electors, and either by general vote, or in two electoral divisions with a population exceeding 40,000, one-half the number to be elected by each division, but such by-law shall not come into force until it has been first submitted to a vote of the electors, and the persons entitled to vote on such by-law shall be the persons entitled to vote at municipal elections. Upon a petition being presented by 400 of the electors, it shall be submitted at the next municipal election following, and such by-law being carried by a majority of the electors voting thereon, shall come into effect at the next annual municipal election.

Such a by-law may be repealed by a by-law to be submitted to the electors at any annual municipal election held not later than five years after its first coming into effect. The repealing by-law to be submitted to a vote of the municipal electors after being petitioned for by at least 400 of such electors. Where such vote has been in favor of the election of mayor and aldermen by a general vote of the electors, and not by ward, a by-law bringing the Act into force may be passed by the council of the municipality before the first day of July next, without submitting the same to a vote of the municipal electors.

Public Meetings. R.S.O. 1897, Cap. 230.

The notice to be issued by the sheriff of any county, or by the mayor of any city or town, or by two or more justices of the peace, for calling any public meeting shall be issued at least three days before the day on which such meeting is appointed to be held, and shall set forth the names of the requisitionists, or of a competent number of them. Also that the meeting is called within conformity of the provisions of this Act, and that such meeting, and all persons attending the same, will be within the protection of this Act, and that all persons are required to take notice and govern themselves accordingly.

Every person required by law, or who has in the usual way been appointed at such meeting to preside over the same, shall cause order to be kept at such meetings, and shall commence the proceedings of the meeting by causing the summons or notice calling the meeting, or the declaration whereby the same is declared to be a public meeting, under the protection of this Act, to be publicly read. The person who presides over such public meeting shall cause any person who attempts to interrupt or disturb such meeting to be removed to such a distance from the same as may effectually prevent such interruption or disturbance, and may adjudge any person who makes such an attempt guilty of such attempted disturbance, upon which conviction any justice of the peace may, by warrant under his own hand, forthwith commit such person to the common gaol of the county or district, for any period not exceeding forty-eight hours from the time of commitment signed, and until the lawful costs of the constable and gaoler for the arrest, transmission and detention of such person are paid or satisfied.

Every action to be brought against any person for anything by him done under authority of this Act, must be brought within twelve months next after the cause of such action accrued.

FACTORIES. R.S.O. 1897, CAP. 256.

An Act for the protection of persons employed in factories.

Provided that where not more than five persons are employed within any place coming within the foregoing definition of a factory, and that where children, young girls or women are employed at home, that is to say, in a private place, house or room used as a dwelling, wherein neither steam, water or other mechanical power is used in aid of the manufacturing process carried on there, and wherein the only persons employed are members of the same family dwelling there, the provisions of this Act shall not apply.

A part of a factory may for the purposes of this Act be taken to be a separate factory; and a place used as a dwelling shall not be deemed to form any part of the factory for the purposes of this Act.

Where a place situate within the precincts of a factory is used solely for some other purpose than the manufacturing process carried on in the factory, such place shall not be deemed to form any part of the factory for the purposes of this Act, but shall be deemed to be a separate factory and regulated accordingly.

No place shall be excluded from the definition of a factory by reason only that such place is in the open air.

Where any owner, occupier or tenant of any premises, building, workshop, structure, room or place, who has the right of access thereto, and control thereof, lets or hires out or contracts for work or labor to be done therein by any other person, and such other person employs therein any workman, child, young girl or woman, in or for the carrying out or performing of any such work or labor, every person thus employed shall, for the purposes of this Act, be considered and taken as being in the service of the said owner, tenant or occupier, and in computing the number of persons employed in any place in order to ascertain if such place comes within the definition of a factory according to the intent and meaning of this Act, every such person shall be taken into account.

"Child" shall mean a person under the age of fourteen years.

"Young girl" shall mean a girl of the age of fourteen years and under the age of eighteen years.

"Woman" shall mean a woman of eighteen years and upwards.

No child shall be employed in any factory, except in the business of canning or dessicating fruits and vegetables and the work incidental thereto, as provided above.

The Lieutenant-Governor-in-Council may, from time to time, by order-in-Council, notice of which shall be published in The Ontario Gazette, prohibit the employment of girls under the age of eighteen years, and of boys under the age of sixteen years in factories the work in which is deemed by the Lieutenant-Governor-in-Council to be dangerous or unwholesome.

It shall not be lawful to employ in a factory any child, young girl or woman so that the health of such child, young girl or woman is likely to be permanently injured, and whoever so employs any child, etc., shall upon summary conviction thereof incur and be liable to imprisonment in the common gaol of the county wherein the offence has been committed for a period not exceeding six months, or to a fine of not more than $100, with costs of prosecution, and in default of immediate payment of such fine and costs, then to imprisonment as aforesaid.

It shall not be lawful for any child, young girl or woman to be employed for more than ten hours in one day, nor more than for sixty hours in one week, unless a different apportionment of the hours of labor per day has been made for the sole purpose of giving a shorter day's work on Saturday, in every factory the employer shall allow every child, etc., therein employed not less than one hour at noon of each day for meals, but such hour shall not be counted as part of the time herein limited as respects the employment of children, etc.

If the inspector so directs in writing the employer shall not allow any child, etc., to take meals in any room wherein any manufacturing process is then being carried on. And if the inspector so directs in writing the employer shall at his own expense provide

a suitable room in the factory, or in connnection therewith, for the purpose of a dining and eating room for the persons employed in the factory.

Notwithstanding anything contained in this Act, women may, during the months of July, August, September and October in any year, be employed to a later hour than nine o'clock in the afternoon of any day in any factory wherein the only work or operations carried on relate to and are exclusively such as may be necessary for the canning or dessicating of fruits or vegetables, and the preparation thereof; but no woman shall be employed during the said months to a later hour than nine o'clock on the afternoon of any day for more than twenty days in the whole, and in reckoning such period of twenty days every day on which any woman has been employed to a later hour shall be taken into account.

Where any woman is employed on any day to a later hour than seven o'clock in the afternoon, she shall, on every such day, and in addition to the hour provided at noon, be allowed not less than forty-five minutes for an evening meal between the hours of five and eight o'clock.

Subject to the regulations which may be made in that behalf by the Lieutenant Governor in Council, it shall be lawful for the Inspector, where any accident, which prevents the working of any factory happens to the motive power of any machine, or where the exigencies of certain trades require that children, young girls or women working in a factory shall be employed for a longer period than is herein provided, on due proof of such accident or exigency, to give permission for such exemption, as, in his judgment, will, fairly to all parties concerned, make up for any loss of labor from such accident, or meet the requirements of any exigency of trade. In such cases no woman, etc., shall be employed before the hour of six o'clock in the morning, nor after nine in the evening, and the hours of labor shall not be more than twelve in any one day, nor more than seventy-two and a half in any week. And such exemption shall not comprise more than thirty-six days, on the whole, in any twelve months.

A child shall not be allowed to clean any part of the machinery in a factory while the same is in motion by the aid of steam, water or other mechanical power .

A young girl or woman shall not be allowed to clean any part of the machinery in a factory as is mill-gearing while the same is in motion for the purpose of propelling any part of the manufacturing machinery. A child or young girl shall not be allowed to work between the fixed and traversing part of any self-acting machine, while the same is in motion.

Every factory shall be kept in a cleanly state, and free from effluvia arising from any drain, privy or other nuisance.

A factory shall not be so overcrowded while work is being carried on therein, as to be injurious to the health of the employees.

Every factory shall be ventilated in such a manner as to render harmless, so far as is reasonably practicable, all the gases, vapors, dust and other impurities generated in the course of the manufacturing process that may be injurious to health. In every factory there shall be kept a sufficient number and description of privies, earth and water closets and urinals for the use of the employees, which shall at all times be kept clean and well ventilated; and separate sets thereof shall be provided for the male and female employees.

In every factory all dangerous parts of mill-gearing, machinery, vats, pans, caldrons, reservoirs, wheel-races, flumes, water channels, doors, openings in the floors or walls, bridges and all other like dangerous places shall, as far as practicable, be securely guarded.

No machinery other than steam engines shall be cleaned while in motion if the Inspector so directs by written notice.

The openings of every hoistway, hatchway, elevator, etc., shall be provided with and protected by trap-doors or self-closing hatches, and such trap-doors, etc., shall be kept closed at all times except when in actual use by the persons authorzied by the employer to use the same.

In every factory there shall be such means of extinguishing fire, as the Inspector, acting under the regulations made in that behalf, directs in writing.

The main inside and outside doors shall open outwardly, and any door leading to or being the principal or main entrance to the factory, or to any tower, stairways, or fire-escapes therein, or belonging thereto, shall not be bolted, barred or locked at any time during the ordinary and usual working hours of the factory.

In case of a fire or accident in any factory occasioning any bodily injury to a person employed therein, whereby he is prevented from working for more than six days, notice shall be sent to the Inspector in writing by the employer forthwith, after the expiration of the said six days; in case of an explosion occurring in any factory, whether any person is injured thereby or not, the fact shall be reported to the Inspector within twenty-four hours of the occurrence. Where in any factory any person is killed or injured through any cause, written notice shall be sent to the Inspector within twenty-four hours.

In case of neglect on the part of any employer to comply with the foregoing provisions with respect to sending written notices to the Inspector, such employer shall be liable to a fine not exceeding $30.00.

The provisions of this Act which relate to cleanliness, ventilation, etc., and to children, etc., being during any part of the times allowed for meals in any factory, and to sending notices of accidents, shall not apply where persons are employed at home, that is to say, in any private room, house, place, etc., used as a dwelling.

Nothing in this Act shall extend to any person being a mechanic, artisan or laborer, working only in repairing the machinery in, or any part of, a factory.

The Lieutenant-Governor in Council may from time to time, for the purpose of carrying out this Act, make such rules and regulations for enforcing its provisions, and for the conduct and duties of inspectors, as may be deemed necessary. And also from time to time appoint a female inspector, in addition to the other inspectors directed by law.

Every person shall, within one month after he begins to occupy a factory serve on the Inspector a written notice stating the name of the factory, the place where it is situated, the address to which he desires his letters to be addressed, the nature of the work, the amount of moving power therein, and the name of firm under which the business of the factory is to be carried on, and in default shall be liable to a fine not exceeding $30.00.

Such annual or other report of the Inspector as the Lieutenant-Governor from time to time directs, shall be laid before the Legislative Assembly.

Industries included under Factories Act.

Agricultural Implement Factories.
Auger Factories.
Axle and Spring Factories.
Bakehouses and Bakeshops.
Barb Wire Factories.
Barrel Factories.
Bell Factories.
Billiard Table Factories.
Bird Cage Factories.
Biscuit Factories.
Blacking Factories.
Blanket Factories.
Boiler Factories.
Bolt and Nut Factories.
Book-binding Factories.
Boot and Shoe Factories.
Box Factories.
Brass Factories.
Breweries.
Broom Factories.
Brush Factories.
Bustle and Hoopskirt Factories.
Button Factories.
Canning Factories.
Cap Factories.
Carpet Factories.
Carriage Factories.
Carriage Goods (Iron) Factories
Carriage Woodwork Factories.
Cartridge Factories.
Car Shops.
Cheese Box Factories.
Chemical Works.
Childs' Carriage Factories.
Cider Factories.
Cigar Factories.
Cigar Box Factories.
Clay Pipe Factories.
Clock Factories.
Clothing Factories.
Coffin Factories.
Confectionary Factories.
Coopers' Factories.
Cork Factories.

Industries under Factories Act—Continued.

Corset Factories.
Corset and Hoopskirt Steel Factories.
Cotton Factories.
Distilleries.
Domestic Utensils Factories.
Dress Shield Factories.
Drop Forging Factories.
Dye Works.
Edge Tool Factories.
Electric Machinery Factories.
Electrotype Foundries.
Emery Wheel Factories.
Envelope Factories.
Extracts and Essential Oil Factories.
Felt Factories.
File Works.
Flax Mills.
Foundries
Fringe and Tassel Factories.
Fruit Dessicating Factories.
Furniture Factories.
Furriers' Workshops.
Galvanized and Pressed Ironwork Factories.
Glass Works.
Glove Factories
Glucose Factories.
Gun and Small Arm Factories
Hair Cloth Factories.
Hames Factories.
Hammer Factories.
Hat Factories.
Hinge Factories.
Horn Comb Factories.
Hobby Horse Factories.
Hosiery Factories.
Iron Bridge Works.
Jams, Jellies and Pickle Works.
Jewellery Factories.
Kaoka Factories.
Knitting Factories.
Knitting Machine Factories.
Knitting Needle Factories.
Lace Factories.
Lamp Goods Factories.
Last Factories.
Laundries.
Laundry, Bluing and Washing Crystal Factories.
Lead Pipe and Shot Factories.
Linen, Cotton and Bag Factories.
Lithographers' Workshops.
Lock Factories.
Locomotive Works.
Machine Shops.
Machine Screw Works.
Mantel Piece Factories.
Marble Works.
Match Factories.
Matting Factories.
Mattress Factories.
Metallic Shingle Factories.
Mill Furnishing Works.
Mirror Factories.
Nail Works.
Necktie Works.
Oil Mills.
Oil Refineries.
Organ Factories.
Organ Reed Factories.
Ornamental Moulding Factories.
Paint Works.
Paper Box Factories.
Paper Collar Factories.
Paper and Pulp Mills.
Parafine Factories.
Patent Medicine Factories
Piano Factories.
Piano and Organ Key-board Factories.
Picture Frame Works.
Pin Factories.
Planing Mills.
Plated Metal Works
Potteries.
Printing Ink Factories
Pulp Factories.
Rag-sorting Workshops.
Rattan Goods Factories.
Reaper Knife Factories.
Rivet Works.
Rolling Mills.
Rope Works.
Rubber Factories.
Saddlery Hardware Factories
Safe Works.
Salt Drying Factories.
Sash and Door Factories.
Saw Factories.
Saw Mills.
Scale Works.
Sewer Pipe Factories.
Sewing Machine Works.
Shirt Factories.
Shoddy Factories.
Shovel Factories.
Show Case Factories.
Silk Factories.
Skate Works.
Soap Works.
Soda Water Factories.
Spice and Coffee Mills.
Spool Factories.
Stained Glass Factories.
Starch Factories.
Stave Factories.
Stay Factories.
Steel Wire Factories.
Straw Works.
Sugar Refineries
Suspender Factories
Syrup Factories.
Tanneries.
Terra Cotta Works.
Thread Spooling Factories.
Tin Stamping Works.
Tobacco Factories.
Toy Factories.
Trunk Factories.
Tub and Pail Works.
Type Foundries.
Varnish Works.
Velocipede and Bicycle Factories.
Vinegar Works.
Waggon and Sleigh Factories.

Industries under Factories Act—Concluded.

Wall Paper Factories.
Watch Case Factories.
Wax Paper Factories.
Whip Factories.
Window Shade Factories.
Wire Goods Factories.
Woodenware Factories
Wood Pulley Factories.
Wood Screw Factories.
Woollen Factories.

REGULATION OF SHOPS. R.S O. 1897, CAP. 257.

An Act Respecting Shops and Places Other than Factories.

No child, young girl or woman shall be employed in or about the shop on any day of the week, other than Saturday or the day next before a statutory holiday, before the hour of seven o'clock in the morning, or after the hour six o'clock the evening.

Saturday labor shall not commence before the hour of seven o'clock in the morning nor continue after the hour of ten o'clock in the evening.

There shall be allowed for each child ,etc., so employed not less than one hour for the noonday meal, and not less than forty-five minutes for the evening meal.

If any child, young girl or woman is employed in a shop on the day next a statutory holiday until ten o'clock in the evening, in that case such child, etc., shall not be employed after six o'clock in the evening on Saturday of the same week.

Nothing in this section contained shall apply or be in force as to any shop, from the 14th day of December to the 24th day of December, inclusive, in each year.

In any shop where females are employed, the employer shall at all times provide and keep therein a sufficient or suitable seat or chair for the use of every such female and shall permit her to use such chair when not necessarily engaged in her work

Any person offending against the provisions of this Act shall be liable to a fine of not less than $10.00, nor more than $25.00, with the costs of prosecution, and in default of immediate payment of such fines and costs, to be imprisoned in the common gaol of the county for not less than one month or more than three months.

The provisions of his Act relating to the sanitary conditions of shops, and the means of extinguishing fire, etc., are practically the same as the provisions of the Factories Act in this respect.

The Inspector shall have the right to exercise such powers as may be necessary for carrying this Act into effect.

Bake Shops.

All bake shops to which this Act applies shall be constructed as to lighting, heating ventilating and draining in such a manner as not to be injurious to the health of any person working therein, and shall be kept at all times in a clean and sanitary condition, so as to secure the production and preservation of all the food products therein in a good, and wholesome condition.

Every bake shop shall be supplied with a proper washroom, closet and other, conveniences necessary for the health and comfort of the persons employed therein.

The sleeping places of the employees shall be entirely separate from the bake shop and no person shall be allowed to sleep in such shop.

No employer shall allow or require any employee to be in any bake shop to work on Sunday, nor to work more than twelve hours on any day, or more than sixty hours in any one week, except by permission of Inspector

No employer shall knowingly require or permit any person to work in his bake shop who is effected with consumption of the lungs, or with scrofula, or with any venereal disease, and every employer is hereby required to maintain himself and his employees in a clean and healthy condition, while engaged in the manufacture, handling or sale of such food products.

Any employer who violates any of the provisions of this Act which relate to bake shops shall for the first offence pay a penalty of not less than $20.00, besides costs

thereof, and not more than $50.00; and for the second offence shall pay a penalty of not less than $50.00, besides costs, and not more than $100.00, and in default of payment shall be imprisoned in the common gaol of the county in which the offence is committed, for a period not less than thirty days, or more than six months, and be kept at hard labor at the discretion of the Magistrate, and for the third and subsequent offence shall be imprisoned in gaol for a period not less than six months nor more than one year, to be kept at hard labor at the discretion of the Magistrate.

An Act to Amend the Ontario Shops Regulation Act.

S.O., 1900, Cap. 43, provides that every person contracting for the manufacture of coats, vests, trousers, overalls, cloaks, caps, drawers, blouses, waists, waist bands, underwear, neckwear, shirts, or any parts thereof, or any other garment or article of clothing, or giving out for improvement, manufacture or alteration, incomplete material from which the said articles or any of them are to be made, or to be wholly or partially altered or improved, shall keep a written register of the names and addresses, serially numbered, of all the persons to whom such work or material is given to be made, altered or improved, or with whom he may have contracted to do the same; and such register shall at all times be kept prominently posted up in the office of the person thus giving out such articles for manufacture, alteration or improvement.

Every article thus made, altered or improved, as aforesaid, shall bear upon a label attached thereto, the register number or the name and address of the person to whom the same was given for manufacture, alteration or improvement, and any false statement upon such label shall render the person making the same liable to the penalties provided by this Act for making false entry in any register, notice, certificate or document.

No person shall knowingly sell or expose for sale any of the articles mentioned in this section and made in any dwelling house, tenement house, or building in the rear of any tenement, etc., without a permit from the inspector, stating that the place of manufacture is thoroughly clean, and otherwise in good sanitary condition. Such permit shall state the maximum number of persons allowed to be employed upon the said premises, and shall not be granted until an inspection of the premises is made by the inspector.

When any article mentioned under this section is found by the inspector to be made under unclean or unhealthy conditions, or upon any unregistered premises, he shall seize and impound the same, and affix thereto a label bearing the words "unsanitary" printed on a tag not less than four inches in length.

The owner of such article shall, after it has been disinfected, be entitled to have the same returned to him, upon first paying the costs of such seizure and disinfection.

If the inspector finds evidence of unhealthy conditions, or of infectious or contagious disease present in any workshop, tenement or dwelling, where any of the articles herein mentioned are manufactured, etc., he shall forthwith report the same to the local board of health, and the board shall issue such order as the public health may require, or may condemn or destroy all such infectious and contagious articles, or any articles manufactured under unsanitary conditions as aforesaid.

Immigration of Children.

R. S. O., 1897, Cap. 262, provides that no child shall be brought or caused to be brought into the Province of Ontario by any society or agent, or by any person other than the parent of the child, or person standing in loco parentis to such child, from any port in Great Britain or Ireland, unless a certificate has first been obtained from an examiner stating that he has satisfied himself that the child named in the certificate has not been convicted of any crime, nor displayed any criminal tendencies, and that in other respects he is a child who may lawfully be brought into the Province.

Every society or agent shall maintain a careful supervision over every child caused by them to be brought into the Province, until such a child attains the age of eighteen years, and shall provide a permanent home or shelter, to which such child may be returned after being placed out in a foster home, or as an apprentice, if the person with whom the child has been placed is unable, or unwilling to retain the custody of the child; and the address of such shelter shall be specified in every agreement made with persons receiving children into foster homes or as apprentices ,and every such person shall, when so required by the society or agent, furnish full particulars as to the health, conduct, progress and welfare of such child.

Any complaints received that a child placed out in a foster home, or as an apprentice is being ill-treated or overworked, etc., shall be immediately investigated by the society or agent, and the necessary steps taken to protect the child from future ill treatment or neglect.

Every sociey or agent having the custody of any child brought into the Province shall be entitled to send such child to the public or separate schools of the municipality in which the child resides, in the same manner as the child of any ratepayer.

If any child hereafter so brought into the Province of Ontario, within three years thereafter, becomes dependent on public or private charity, the society or agent, if so ordered by the Inspector, shall pay to the Province or to any person maintaining the child, the cost of the maintenance of the child, and may be required to return the child to the place from which he came into this Province.

Any Society or agent who brings into the Province any child, who from defective intellect, or disease or physical infirmity, or any other defect, is unable to follow any trade or calling, or any child of known vicious tendencies, or any child who is known to be an habitual criminal, or whose parents have been criminals, lunatics or idiots, or weak-minded or defective constitutionally, or confirmed paupers or diseased, shall be liable to a penalty of not more than $100 or less than $10, and in default of payment shall be imprisoned for any period not exceeding three months.

Horse Power for Threshing Machines.

R.S.O., 1897, cap. 265,—provides that all persons owing or running any threshing machine, wood-sawing or other machine, which is connected to a horse-power, by means of a tumbling rod or line of shafitng, shall cause each of the knuckles, couplings and joints, etc., of such tumbling rod or line of shafting to be safely boxed or secured while running, with wood, leather or metal covering, in such manner as to prevent injury to persons passing over or near such tumbling rod, etc., and shall cause all oiling cups attached to arbors or journals to which driving belts are attached, to be furnished with tubes of tin or other material, which shall exend above the belt so as to prevent damage from oiling when the machine is in motion; and shall further cause a driver's platform to be placed on any horse-power used for driving machienry, of such size as to cover the gearing and to prevent accident to any person from contact with said gearing.

Any person who refuses to comply with the provisions of this Act shall be liable to a fine of not less than $1 nor more than $20, over and above the costs of prosecution, and in default of payment shall be imprisoned in the nearest common gaol for a period of not less than two or more than twenty days.

Technical Schools.

R.S.O., 1897, Cap. 301,—provides that the trustees of any high school or board of education may, by resolution passed at a special meeting, called for the purpose, establish a technical school, or may change any high school already established into a technical school, providing that such resolution shall not take effect until ratified by by-law of

each municipality composing the high school district, and also by the county council (if any) required by the High School Act to contribute the equivalent of the legislative grant towards the maintenance of such high school.

The provisions of the High Schools Act shall apply to technical schools, subject to any regulations of the Education Department, with respect to fees, etc.

Technical Schools for Adults.

It shall be lawful for the municipality corporation of any city or own to appropriate such sums of money as may be deemed expedient for the establishment of a technical school for adults within the meaning of this Act.

The general management of the schools for adults shall be vested in and exercised by a board of management, to be appointed as provided in section 9 of the Public Libraries Act. In cities and towns where there is a Public Library, technical schools for adults shall be under the control of the board of such library.

Employment of Prisoners.

R.S.O., 1897, Cap. 316,—provides that the Lieutenant-Governor in Council may, from time to time direct the employment upon any work or duty, the nature of which is to be specified, beyond the limits of any common gaol, of any prisoner who is sentenced to hard labor under the authority of any Statute of Ontario, or for breach of the by-laws of any municipal corporation in this Province. Every prisoner shall during such employment be subject to the rules and regulations of the gaol so far as applicable. No prisoner shall be so employed, save under the strictest care and supervision of officers appointed to that duty.

An account shall be kept of the amount earned by the labor of prisoners, and shall be divided between the Province and the county in proportion to the amount contributed by them respectively towards the maintenance of such prisoners.

On April 4th, 1900, the following resolution was passed by the Legislature of Ontario:

Resolved, that in the opinion of this House all Government contracts should contain such conditions as will prevent abuses which may arise from the sub-letting of such contracts, and that every effort should be made to secure the payment of such wages as are generally accepted as current in each trade for competent workmen in the district where the work is carried out, and that this House cordially concurs in such policy, and deems it the duty of the Government to take immediate steps to give effect thereto; and it is hereby resolved that the work to which the foregoing policy shall apply includes not only work undertaken by the Government itself, but also all works aided by a grant of provincial public funds, and that the aforesaid policy shall be forthwith applied to every Department of the public service, and to all parties now performing services for the Government. That this House is further of the opinion that in all appropriate cases the legislation of this House should be in harmony with this resolution.

S.O. 1900, Cap. 14. An Act Respecting the Bureau of Labour

Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows :—

1. There shall be attached to the Department of the Commissioner of Public Works a bureau, to be styled "The Bureau of Labour;"

2. The Lieutenant-Governor may appoint a Secretary of the said Bureau, and may also appoint such other officers as may be necessary for the proper conduct of the Bureau.

3. It shall be the object of the Bureau to collect, assort and systematize and publish information and statistics relating to employment, wages and hours of labor throughout the Province—co-operation, strikes, or other labor difficulties, trades unions,

labor organizations, the relations between labour and capital, and other subjects of interest to workingmen, with such information relating to the commercial, industrial and sanitary condition of workingmen, and the permanent prosperity of the industries of the Province, as the Bureau may be able to gather.

An Act Respecting Aid to Certain Railways ,S. O., 1901, chap. 22, contains clauses for the protection of workmen engaged thereon, as follows:—

8. The workmen, laborers or servants employed on or about the construction of the said railway, each of them shall be charged fair and reasonable prices for any board, provisions, clothing and other necessaries of life and reasonable comfort, supplied by the company, their agents or any person or person authorized by the said company to supply such goods and accommodation, and upon the breach of any of the provisions of this section or in the event of exorbitant charges being made by the railway company, their agents or other person or persons authorized by the railway company, there may be deducted and retained from moneys payable in respect of such unearned subsidy, or hereafter to be granted subsidy, such amount as the Lieutenant-Governor in Council may think proper.

12. The Lieutenant-Governor in Council may instruct the Secretary of the Provincial Board of Health to enforce such reasonable sanitary regulations on the works and in the camps connected therewith during the construction of the said railways, as may be deemed necessary to maintain proper sanitary conditions and accommodation, and contractors shall have at such camps a tent and store, where in case of emergency a patient suffering from a contagious disease may be isolated at once, so as not to endanger the men in the camp.

18. All the provisions of the "Act to secure payment of wages for labor performed in the construction of public works," of the "Act respecting subsidies to railways and to encourage the manufacture of railway steel and iron in the Province," and of "The Ontario Railway Act." shall apply to the subsidies granted by this Act, and the wages paid on any of the said works shall be such as are generally accepted as current for competent workmen in the respective districts where such railways are to be constructed.

An Act Respecting Sanitary Regulations in Unorganized Territories, S. O., 1901, chap. 34, provides that the Lieutenant-Governor may from time to time make regulations applicable only to those parts of the Province which are without municipal organization.

(1) Respecting any particular industry, and the conditions under which the same may be carried on, for the purpose of preventing nuisances and the outbreak or spread of disease.

(2) For the cleansing, regulating and inspection of lumbering camps, mining camps, and railway construction, and other places where labor is employed.

(3) For providing for the inspection of houses and premises.

(4) For providing for the employment of duly qualified medical practitioners by employers of labor in lumber and mining camps and railway construction and other works where labor is employed, and for the erection of permanent or temporary hospitals for the accommodation of persons so employed.

S.O. 1901, Cap. 35. An Act to Further Improve the Factories Act.

1. Sub-section (4) of section 15 of the Factories Act is amended by inserting in the first line after the word "provided" the words "by the owner of the factory," and sub-section (5) of the same section is amended by adding thereto the following:

"And the owner of any factory who does not provide the equipment, accommodation, or conveniences required in sub-sections (3) and (4) of this section within two months after receiving from the inspector notice in writing in regard to the same shall be deemed to be guilty of a contravention of the provisions of this Act and shall be liable to the penalty provided in section 19 of this Act."

2. Section 20 of the Factories Act is hereby amended by adding thereto the following sub-sections :—

(f) Inflammable material such as coal oil or petroleum, benzine and naphtha, and explosives of all kinds shall be kept stored when not in actual use in a building separated from the other parts of the factory, or in a fire-proof compartment of the factory approved of by the inspector.

(g) No boiler shall be used that is not insured in some boiler inspection company duly authorized in the Province for that purpose, or that has not been inspected within one year by a competent inspector, such inspector to be a man who has had charge of a boiler and engine for a period of not less than five years, or who holds a certificate as a stationery engineer, and the manager or proprietor shall, whenever so requested by the inspector, produce for examination the insurance policy or the certificate of inspection.

3. Sub-sections (2) and (3) of section 21 of the Factories Act are hereby repealed and the following substituted therefor :—

(2) The owner of every factory over two stories in height, and where deemed necessary by the inspector, the owner of very factory over one storey in height, shall within six months from the time of the passing of this Act, provide the said factory with one or more systems of fire escape as follows, and shall keep the same in god repair :

(a) A sufficient number of tower stairways with iron doorways within reach of or having easy communication with all the working rooms of the factory: or

(b) a sufficient number of iron or other uninflammable fire escapes on the outside of the building, such fire escapes to consist of stairways with railing or iron ladders and to be connected with the interior of the building by iron or tinned doors or windows with iron shutters, and to have suitable landings at every storey including the attic if the attice is occupied as a workroom, and he said stairways to start at a distance of not more than eight feet from the ground or pavement; or

(c) any other system or form of fire escape that may be sanctioned under this Act by the Lieutenant-Governor in Council on the recommendation of the Factories Inspectors.

(3) The owner or proprietor of any factory refusing or neglecting to provide the means of safe exit in case of fire prescribed in this section shall upon conviction thereof incur and be liable to a fine or not more than $500 with costs of prosecution, and in default of immediate payment of such fine and costs, be liable to imprisonment within the common gaol of the county for a period of not more than twelve months.

4. The following is added to the Ontario Factories Act as section 51 :

51. The owner, proprietor or manager of any factory hereafter established and to which this Act applies, shall not begin operations until he shall have received from the Factory Inspector a certificate of inspection of the factory a permit to operate the same; and any such person violating the provisions of this section shall be liable to the penalties provided for in section 19 of this Act.

S.O. 1901, Cap. 36. An Act to Amend the Ontario Shops Regulation Act

1. Section 13 of the Ontario Shops Regulation Act is amended by adding thereto the following sub-sections.

(3) The owner of every shop shall be held responsible for the providing of the sanitary conveniences provided under sub-section (2) of this section, and on failure or refusal to provide the same within two months after receiving written notice from the inspector, shall be liable on conviction to a fine of not more than $500; or in default of payment of the same, shall be imprisoned for a period of not more than twelve months.

(4) Where grinding, polishing or buffing is carried on in any shop, the provisions of section 16 of the Ontario Factories Act shall apply to such shop.

2. Section 39 of the Ontario Shops Regulation Act is repealed and the following substituted therefor :

39. No person shall require, permit or suffer any employee in any bake shop to work on Sunday, nor for more than twelve hours out of every twenty-four hours computed from the time when the employee commences to work, nor more than sixty hours in any one week to be computed as commencing on Monday and ending on Saturday, both days inclusive, except by permission of the inspector given in writing to the employer; and a copy of such permission shall be posted in a conspicuous place in the bake shop

Barber Shops.

3. The said Act is further amended by adding thereto the following as sections 45 and 46.

45. No employer shall require, permit or suffer any employee in any barber shop to work on Sunday, and no proprietor of any barber shop shall open his barber shop or permit the same to be opened to the public or carry on any business or work therein at any time between the hours of 12 o'clock on Saturday night and 12 o'clock on Sunday night.

46. Any employer or any proprietor of a barber shop who violates the provisions of the preceding section shall on conviction thereof be liable to a penalty of not less than $20 besides costs and of not more than $50 besides costs, and in default of payment of the same, shall be imprisoned for a period of not less than thirty days and of not more than six months.

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